

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wet	tland (if known):	Wetland	1-1 D	ate of site vi	sit: <u>3/21/13</u>
Rated by P	Togher	Trained b	y Ecology? Yes √ l	No Date	of training 5/2005
SEC: 4_TV	WNSHP: <u>22N</u> RNGE: <u>4E</u>	Is S/T/R in .	Appendix D? Yes_	No <u></u> ✓	
	Map of wetland unit: F	igure 1	Estimated siz	e 0.26 ac	
	SUM	MARY O	F RATING		
Category 1	based on FUNCTIONS	provided l	y wetland		
I	II III_✓ IV				
Catagomy I	- Saara > -70	Score	for Water Quality	Functions	8
"	I = Score >=70 I = Score 51-69	Sc	ore for Hydrologic	Functions	8
Category II = Score 31-69 Category III = Score 30-50			Score for Habitat	Functions	10
Category IV = Score < 30		r	TOTAL score for I	Functions	26
	based on SPECIAL CH II Does not Apply Final Category (choose	y <u> </u>			IV
	Summary of basic	information			_
	Wetland Unit has Special Characteristics		Wetland HGM used for Rat		
	Estuarine		Depressional Depressional	ing	
	Natural Heritage Wetland	ı	Riverine		
	Bog		Lake-fringe		
	Mature Forest		Slope	✓	
	Old Growth Forest		Flats		
	Coastal Lagoon		Freshwater Tidal		
	Interdunal				

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

Groundwater and surface water runoff are NOT sources of water to the unit. NO – go to 3 YES – The wetland class is Flats If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands. 3. Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? NO – go to 4 YES – The wetland class is Lake-fringe (Lacustrine Fringe) 4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (slope can be very gradual), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.	1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.). 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO − go to 3 YES − The wetland class is Flats If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands. 3. Does the entire wetland unit meet both of the following criteria? — The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; — At least 30% of the open water area is deeper than 6.6 ft (2 m)? ✓ NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe) 4. Does the entire wetland unit meet all of the following criteria? — The wetland is on a slope (slope can be very gradual), — The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.	
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The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.	(without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)?
	The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). NO - go to 5 ✓ YES – The wetland class is Slope	✓ The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\sqrt{NO} NO – go to 7 \sqrt{YES} – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% points = 2 Slope is greater than 5% points = 1 points = 0	2
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	No - 0
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > $\frac{1}{2}$ of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1 Add the points in the boxes above	4
S	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. Grazing in the wetland or within 150ft Untreated stormwater discharges to wetland Tilled fields, logging, or orchards within 150 feet of wetland Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other	multiplier Yes
	YES multiplier is 2 NO multiplier is 1	
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	8

Comments

S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)
	reduce flooding and stream erosion	per box)
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. points = 6 Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:	6 Yes
	The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2 NO points = 0	163
S	Add the points in the boxes above	8
S	S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and erosive flows? <i>Note which of the following conditions apply</i> . Wetland has surface runoff that drains to a river or stream that has flooding problems	(see p. 70)
	Other	multiplier
	(Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam) YES multiplier is 2 NO multiplier is 1	No
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 <i>Add score to table on p. 1</i>	8

Comments

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			Points (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to pr			per box)
H 1.1 Vegetation structure (see p. 72)	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	эргэгэг	Figure
Check the types of vegetation classes present (as defined	d by Cowardin)- Size thresh	old for each	
class is ¼ acre or more than 10% of the area if unit i		sta for each	1 Struc.
Aquatic bed			0
Emergent plants			
Scrub/shrub (areas where shrubs have >30%	cover)		
Forested (areas where trees have >30% cover	r)		
If the unit has a forested class check if:			
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20%	within the forested polygon		
Add the number of vegetation structures that qualify. If	-		
	4 structures or more	points $= 4$	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
	2 structures	points = 1	
	1 structure	points = 0	<u></u>
H 1.2. <u>Hydroperiods</u> (see p. 73)			Figure
Check the types of water regimes (hydroperiods) pr			1 type
regime has to cover more than 10% of the wetland or	^r ¹ /4 acre to count. (see text fo	or	'.
descriptions of hydroperiods)	4		0
Permanently flooded or inundated	4 or more types present	points $= 3$	
Seasonally flooded or inundated	3 types present	points = 2	
Occasionally flooded or inundated Saturated only	2 types present 1 type present	point = 1 $points = 0$	
Permanently flowing stream or river in, or adj	• • •	points – 0	
Seasonally flowing stream in, or adjacent to, the			
Seasonary nowing stream in, or adjacent to, to	ne wetiana		
Freshwater tidal wetland = 2 points	Map of hydro	pperiods	
	Map of Hydro	poriodo	
H 1.3. Richness of Plant Species (see p. 75)	of account the set 10 ft^2	anant matalog	5 -19 sp.
Count the number of plant species in the wetland the of the same species can be combined to meet the size		ereni paicnes	•
You do not have to name the species.	e inresnoia)		1
Do not include Eurasian Milfoil, reed canarygra	ass nurnle loosestrife Can	adian Thistle	
If you counted:		points = 2	
List species below if you want to:	*	points = 2 points = 1	
List species below if you want to.		points = 0	
	· · · · · · · · · · · · · · · · · · ·		
			i l

Total for page 1

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	Low
mudflats) is high, medium, low, or none.	
	1
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	1
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	!
\checkmark Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error. 	
	<u></u>
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	3

Comments

H 2. Does the wetland unit have the opportunity to pro	vide habitat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of buffer criterion that applies to the wetland is to be used in the rating. "undisturbed."		3
 — 100 m (330ft) of relatively undisturbed vegetated areas of circumference. No structures are within the undisturbed also means no-grazing, no landscaping, no — 100 m (330 ft) of relatively undisturbed vegetated areas 50% circumference. — 50 m (170ft) of relatively undisturbed vegetated areas, circumference. ✓ 100 m (330ft) of relatively undisturbed vegetated areas circumference, . — 50 m (170ft) of relatively undisturbed vegetated areas, 	rbed part of buffer. (relatively daily human use) Points = 5 s, rocky areas, or open water > Points = 4 rocky areas, or open water >95% Points = 4 s, rocky areas, or open water > 25% Points = 3 rocky areas, or open water for >	
50% circumference.	Points = 3	
	n 25 m (80ft) of wetland > 95% e OK. Points = 2 >50% circumference. Points = 2 Points = 1 5% of the circumference (e.g. tilled	
H 2.2 <u>Corridors and Connections</u> (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and (either riparian or upland) that is at least 150 ft wide, has or native undisturbed prairie, that connects to estuaries, or	at least 30% cover of shrubs, forest ther wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in ripar roads, paved roads, are considered breaks in the corridor YES = 4 points (go to H 2.3) H 2.2.2 Is the wetland part of a relatively undisturbed and (either riparian or upland) that is at least 50ft wide, has at	r). NO = go to H 2.2.2 I unbroken vegetated corridor	No
forest, and connects to estuaries, other wetlands or undistracres in size? OR a Lake-fringe wetland, if it does not he question above? YES = 2 points (go to H 2.3)		No
H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estual within 3 mi of a large field or pasture (>40 acres) of within 1 mi of a lake greater than 20 acres?	OR	Yes
YES = 1 point	NO = 0 points	

Total for page 4

II 2 2 N I'm at the officer of the late of the	I
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	NI
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	None
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest. Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	0
If wetland has 3 or more priority habitats = 4 points	
* '	
If wetland has 2 priority habitats = 3 points If wetland has 1 priority habitats = 1 point No habitats = 0 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that	3
best fits) (see p. 84)	1
There are at least 3 other wetlands within ½ mile, and the connections between them are	
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some	
boating, but connections should NOT be bisected by paved roads, fill, fields, or other	
development. points = 5	
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe	
wetlands within $\frac{1}{2}$ mile points = 5	
✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are	
disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe	
wetland within ½ mile points = 3	
r i i i i i i i i i i i i i i i i i i i	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat	17
Add the scores from H2.1,H2.2, H2.3, H2.4	!' !
TOTAL for H 1 from page 14	<u> </u>
TO THE TOTAL TOTAL PAGE TO	3
Total Sagra for Habitat Expedience and the points for H 1 H 2 and record the result or	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	10
p. I	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site	Cat. I
YES – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ✓	
SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NOnot a Heritage Wetland	
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 No - go to Q. 2	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 No - Is not a bog for purpose of rating	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No ✓ Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
 Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) 	
YES = Go to SC 5.1 NO $\sqrt{}$ not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
 At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. The wetland is larger than 1/10 acre (4350 square feet) 	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	1 1 1 / 1
If you answered NO for all types enter "Not Applicable" on p.1	

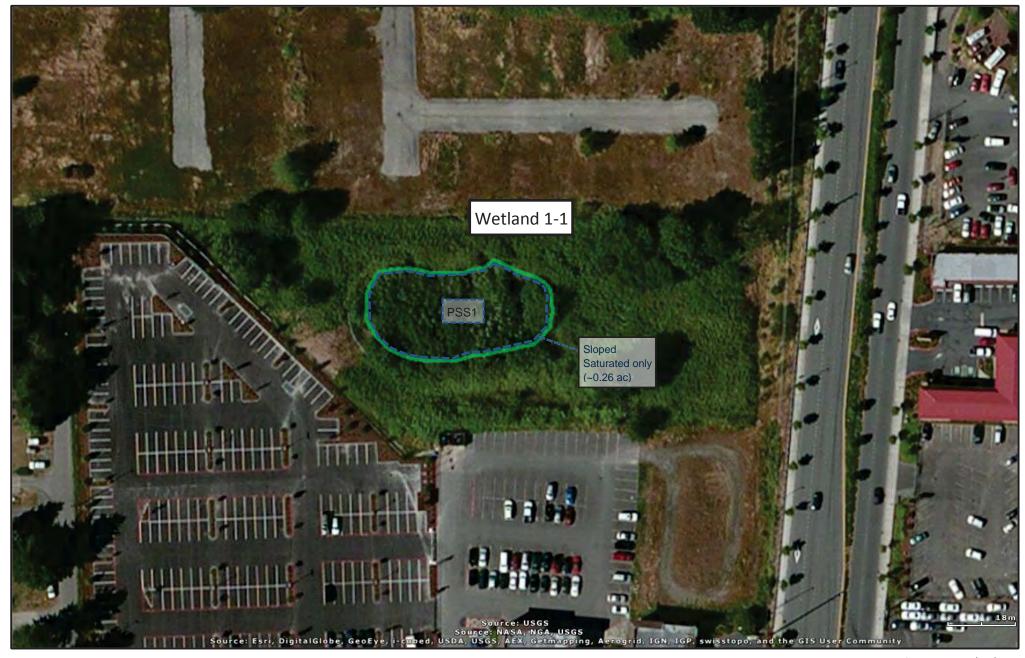




Figure 1-1. Wetland 1-1



RATING SUMMARY – Western Washington

Name of wetland (, 				site visit: N/A_
Rated by L. Daniels	ki/M.Dalzell	Traine	d by Ecology?	✓ Yes 🔲 No	o Date of training 06/14
HGM Class used fo	r rating Depres	ssional	Wetland has m	ultiple HGM	I classes? Y V N
Source o	f base aerial pho	oto/map BingMa	р		can be combined)
1. Category of v	vetland based Category I – Tota Category II – Tota Category III – To	on FUNCTIC al score = 23 - 2 tal score = 20 - tal score = 16	DNS 27 22 - 19		Score for each function based on three ratings (order of ratings
FUNCTION	Category IV – To Improving Water Quality	Hydrologic	15 Habitat		is not important)
	Trace Quality	Circle the ap	propriate ratings		9 = H,H,H 8 = H,H,M
Site Potential	H M L ✓	H ✓ M L	H M L		7 = H,H,L
Landscape Potential	H M V L	H ✓ M □ L	H M L		7 = H,M,M
Value	H M V L	H M V L	H M L	TOTAL	6 = H,M,L
Score Based on Ratings	5	8	3	16	6 = M,M,M 5 = H,L,L 5 = M,M,L
2 Cataramahara	ad an SDECIA	LCHADACTE	DICTICC of	a Alla va al	4 = M,L,L 3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I 🔲 II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I I II
Interdunal	I _II _ III _ IV
None of the above	*

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1-2-1
Hydroperiods	D 1.4, H 1.2	1-2-1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	n/a
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	1-2-2
Map of the contributing basin	D 4.3, D 5.3	1-2-3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	1-2-4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	1-2-5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	1-2-6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	\$ 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1.	Are the water levels in the entire unit usually controlled by tides except during floods?
	NO – go to 2
1	1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
	NO – Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.
2.	The entire wetland unit is flat and precipitation is the only source ($>90\%$) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
	✓ NO – go to 3
3.	Does the entire wetland unit meet all of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size; _At least 30% of the open water area is deeper than 6.6 ft (2 m).
	✓ NO – go to 4 YES – The wetland class is Lake Fringe (Lacustrine Fringe)
4.	Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, The water leaves the wetland without being impounded .
	✓ NO – go to 5
	NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).
5.	Does the entire wetland unit meet all of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river, The overbank flooding occurs at least once every 2 years.

We	etland name or number 1-2
	NO – go to 6 YES – The wetland class is Riverine NOTE : The Riverine unit can contain depressions that are filled with water when the river is not flooding
6.	Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? <i>This means that any outlet, if present, is higher than the interior of the wetland.</i>
	NO – go to 7 YES – The wetland class is Depressional
7.	Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
	■ NO – go to 8 ■ YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
✓ Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving i		
	points = 3	0
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flow	ng outlet. points = 2	3
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowin	•	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	• .	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).	Yes = 4	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested C	owardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	1
Wetland has persistent, ungrazed plants > 1/10 of area	points = 1	
Wetland has persistent, ungrazed plants <1/10 of area	points = 0	
D 1.4. <u>Characteristics of seasonal ponding or inundation</u> :		
This is the area that is ponded for at least 2 months. See description in manual.		•
Area seasonally ponded is > ½ total area of wetland	points = 4	0
Area seasonally ponded is > ¼ total area of wetland ✓ Area seasonally ponded is < ¼ total area of wetland	points = 2 points = 0	
	· ·	4
Total for D 1 Add the points in th		4
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the re	ating on the first pa	ge ————
D 2.0. Does the landscape have the potential to support the water quality function of the sit	e?	
D 2.1. Does the wetland unit receive stormwater discharges?	es = 1	1
<u> </u>	es = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	es = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D	2.1-D 2.3?	0
SourceY	'es = 1 ✓ No = 0	
Total for D 2 Add the points in th	e boxes above	2
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L Record	the rating on the fir.	st page
D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water t 303(d) list?	hat is on the es = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	es = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water qualif there is a TMDL for the basin in which the unit is found)?	ality (<i>answer YES</i> es = 2	0
Total for D 3 Add the points in th	e boxes above	1
Rating of Value If score is: $2-4 = H$ $1=M$ $0=L$ Record the rating or		
- <u>-</u> -		

D2.1 - 24-inch-wide CMP is located at west end of the wetland unit, discharging into the wetland.

D3.2 - Wetland 1-2 is located in the Des Moines Creek basin. Des Moines Creek is on the 303(d) list

DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation		
D 4.0. Does the site have the potential to reduce flooding and erosion?	1011	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Based on the contour layer points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet from Kent points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in)	5	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. ☐ The area of the basin is less than 10 times the area of the unit ☐ The area of the basin is 10 to 100 times the area of the unit ☐ The area of the basin is more than 100 times the area of the unit ☐ Entire wetland is in the Flats class ☐ D 4.3. Contribution of the area of upstream basin to the area of the wetland unit itself. ☐ D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contribution of the area of upstream basin to the area of the wetland unit itself. ☐ The area of the basin is nore than 100 times the area of the unit points = 3 ☐ The area of the basin is more than 100 times the area of the unit points = 5	3	
Total for D 4 Add the points in the boxes above	12	
Rating of Site Potential If score is: 412-16 = H 6-11 = M 0-5 = L Record the rating on the	first page	
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges? \checkmark Yes = 1 \checkmark No = 0	1	
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1	
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1	
Total for D 5 Add the points in the boxes above	3	
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the	first page	
D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ■ Surface flooding problems are in a sub-basin farther down-gradient. points = 1 ■ Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 ■ There are no problems with flooding downstream of the wetland. points = 0	1	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0	
Total for D 6 Add the points in the boxes above	1	
Rating of Value If score is: $2-4 = H$ $\sqrt{1} = M$ $0 = L$ Record the rating on the	first page	

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:	
\square Depressions cover $>^3/_4$ area of wetland points = 8	
Depressions cover > ½ area of wetland points = 4	0
Depressions present but cover < ½ area of wetland points = 2	
No depressions present points = 0	
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, not Cowardin classes)	
Trees or shrubs $> \frac{2}{3}$ area of the wetland points = 8	
Trees or shrubs $> \frac{1}{3}$ area of the wetland points = 6	0
Herbaceous plants (> 6 in high) $> \frac{2}{3}$ area of the wetland points = 6	
Herbaceous plants (> 6 in high) > $^{1}/_{3}$ area of the wetland points = 3	
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland points = 0	
Total for R 1 Add the points in the boxes above	0
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on t	he first page
R 2.0. Does the landscape have the potential to support the water quality function of the site?	-
R 2.1. Is the wetland within an incorporated city or within its UGA? $\ \ \ \ \ \ \ \ \ \ \ \ \ $	0
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	0
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years? Yes = 1 No = 0	0
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	0
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources	0
Total for R 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L Record the rating on t	he first page
R 3.0. Is the water quality improvement provided by the site valuable to society?	
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	0
Yes = 1No = 0	
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found) $\qquad \qquad \qquad$	0
Total for R 3 Add the points in the boxes above	0
Rating of Value If score is 2-4 = H 1 = M 0 = L Record the rating on t	he first page

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS		
Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion		
R 4.0. Does the site have the potential to reduce flooding and erosion?		
R 4.1. Characteristics of the overbank storage the wetland provides:		
Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the		
stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average		
width of stream between banks).		
☐ If the ratio is more than 20 points = 9		
If the ratio is 1-<5 points = 2		
If the ratio is < 1 points = 1		
R 4.2. Characteristics of plants that slow down water velocities during floods: <i>Treat large woody debris as forest or</i>	_	
shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes).	0	
Forest or shrub for $>^1/_3$ area OR emergent plants $>^2/_3$ area points = 7		
Forest or shrub for $> \frac{1}{10}$ area OR emergent plants $> \frac{1}{3}$ area points = 4		
Plants do not meet above criteria points = 0		
Total for R 4 Add the points in the boxes above	0	
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the		
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
R 5.1. Is the stream or river adjacent to the wetland downcut?		
R 5.2. Does the up-gradient watershed include a UGA or incorporated area?	0	
R 5.3. Is the up-gradient stream or river controlled by dams?	0	
Total for R 5 Add the points in the boxes above	0	
Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L	ne first page	
R 6.0. Are the hydrologic functions provided by the site valuable to society?		
R 6.1. Distance to the nearest areas downstream that have flooding problems?	0	
Choose the description that best fits the site.		
The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2		
Surface flooding problems are in a sub-basin farther down-gradient points = 1		
No flooding problems anywhere downstream No flooding problems anywhere downstream points = 0		
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? \square Yes = 2 \square No = 0	0	
Total for R 6 Add the points in the boxes above	0	

Rating of Value If score is: 2-4 = H 1 1 = M 0 = L

Record the rating on the first page

LAKE FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
L 1.0. Does the site have the potential to improve water quality?	
L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes):	0
Plants are more than 33 ft (10 m) wide points = 6	
Plants are more than 16 ft (5 m) wide and <33 ft points = 3	
Plants are more than 6 ft (2 m) wide and <16 ft points = 1	
Plants are less than 6 ft wide points = 0	
L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed.	0
Cover of herbaceous plants is >90% of the vegetated area points = 6	
Cover of herbaceous plants is $> \frac{2}{3}$ of the vegetated area points = 4	
Cover of herbaceous plants is $> \frac{1}{3}$ of the vegetated area points = 3	
Other plants that are not aquatic bed > $^2/_3$ unit points = 3	
Other plants that are not aquatic bed in $> \frac{1}{3}$ vegetated area points = 1	
Aquatic bed plants and open water cover $> \frac{2}{3}$ of the unit points = 0	
Total for L 1 Add the points in the boxes above	0
Rating of Site Potential If score is:8-12 = H4-7 = M0-3 = L	he first page
L 2.0. Does the landscape have the potential to support the water quality function of the site?	
L 2.1. Is the lake used by power boats?	0
L 2.2. Is > 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants? Yes = 1 No = 0	0
L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil? Yes = 1 No = 0	0
Total for L 2 Add the points in the boxes above	0
Rating of Landscape Potential: If score is: 2 or 3 = H 1 = M 0 = L Record the rating on t	he first page
L 3.0. Is the water quality improvement provided by the site valuable to society?	1
L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?	0
L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)? Yes = 1 No = 0	0
L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES</i> if there is a TMDL for the lake or basin in which the unit is found.	0
Total for L 3 Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on t	he first paae

LAKE FRINGE WETLANDS		
Hydrologic Functions - Indicators that the wetland unit functions to reduce sho	reline erosio	on
L 4.0. Does the site have the potential to reduce shoreline erosion?		
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not include Aq	uatic bed):	0
Choose the highest scoring description that matches conditions in the wetland.		O
> ¾ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6	
> 3/4 of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4	
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4	
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2	
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0	
Rating of Site Potential: If score is: 6 = M 0-5 = L Record	the rating on t	he first page
L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
L 5.1. Is the lake used by power boats with more than 10 hp?	1 No = 0	0
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	1 No = 0	0
Total for L 5 Add the points in the bo	xes above	0
Rating of Landscape Potential If score is: 2 = H 1 1 = M 0 = L Record	the rating on t	ha first naga
hecord	the ruting on t	ne jirst page
L 6.0. Are the hydrologic functions provided by the site valuable to society?		
L 6.0. Are the hydrologic functions provided by the site valuable to society:		
L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is p	oresent,	0
choose the one with the highest score.	-	U
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the	unit	
	points = 2	
☐ There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1	
Other resources that could be impacted by erosion	points = 1	
There are no resources that can be impacted by erosion along the shores of the unit	points = 0	
	the rating on t	he first nage

NOTES and FIELD OBSERVATIONS:

SLOPE WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	0
Slope is 1% or less Slope is > 1%-2% points = 3 points = 2	
Slope is > 2%-5% Slope is greater than 5% points = 1 points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.	0
Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > ½ of area points = 3	
Dense, woody, plants > ½ of area points = 2	
Dense, uncut, herbaceous plants > ¼ of area Does not meet any of the criteria above for plants points = 1 points = 0	
Total for S 1 Add the points in the boxes above	0
Rating of Site Potential If score is:12 = H6-11 = M0-5 = L	the first page
S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	
Other sources	0
	0
	0
Total for S 2 Add the points in the boxes above	0
Total for S 2 Rating of Landscape Potential If score is:1-2 = M	0 the first page
Total for S 2 Rating of Landscape Potential If score is:1-2 = M	0 the first page
Total for S 2 Rating of Landscape Potential If score is:1-2 = M	0 the first page 0 0
Total for S 2 Rating of Landscape Potential If score is:1-2 = M	0 the first page 0 0

SLOPE WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1	0
All other conditions points = 0	
Rating of Site Potential If score is: 1 = M 0 = L Record the rating on	the first page
S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? \square Yes = 1 \square No = 0	0
Rating of Landscape Potential If score is:1 = M0 = L Record the rating on a	the first page
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream Points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on	the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed Emergent Scrub-shrub (areas where shrubs have > 30% cover) Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ✓ Permanently flooded or inundated ✓ Seasonally flooded or inundated ✓ Occasionally flooded or inundated ✓ Saturated only ✓ Permanently flowing stream or river in, or adjacent to, the wetland ✓ Seasonally flowing stream in, or adjacent to, the wetland ✓ Lake Fringe wetland ✓ Preshwater tidal wetland ✓ 2 points	1
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species 5 - 19 species points = 1	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Low = 1 point Moderate = 2 points All three diagrams in this row are HIGH = 3points	1

Wetland name or number 1-2

H 1.5. Special habitat features:	1
Check the habitat features that are present in the wetland. The number of checks is the number of points.	'
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	
strata)	
Total for H 1 Add the points in the boxes above	4
Rating of Site Potential If score is: 15-18 = H 7-14 = M 0-6 = L Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	_
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	0
Calculate: % undisturbed habitat $\frac{0.00}{}$ + [(% moderate and low intensity land uses)/2] $\frac{0.00}{}$ = $\frac{0.00}{}$ %	U
If total accessible habitat is:	
$\square > \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
✓ < 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	2
Calculate: % undisturbed habitat $\frac{20.00}{}$ + [(% moderate and low intensity land uses)/2] $\frac{5.00}{}$ = $\frac{25.00}{}$ %	2
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches	
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	0
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
$\square \le 50\%$ of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 4-6 = H 1-3 = M	he first naae
Accordance to tential in score is	ne jiist page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score</i>	0
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
H lt has 3 or more priority habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW priority species	
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If score is: $2 = H$ $1 = M$ $0 = L$ Record the rating on	tne first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: *NOTE:* This question is independent of the land use between the wetland unit and the priority habitat.

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.

Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 see web link above*).
- **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).

Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).

Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
☐ With a salinity greater than 0.5 ppt ☐ Yes –Go to SC 1.1 ✓ No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Preserve, state Park of Educational, Environmental, of Scientific Reserve designated under WAC 552-50-151?	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	Cat. I
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	Cat. I
Conservation Value?	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV	,
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No = Not a WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? \square Yes – Go to SC 3.3 \square No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog	
pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA	
Department of Fish and Wildlife's forests as priority habitats? If you answer YES you will still need to rate	
the wetland based on its functions.	
Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered	
canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of	
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.	
Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	Cat. I
Yes = Category I No = Not a forested wetland for this section	Cut. 1
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from	
marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt)	
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	
SC 5.1. Does the wetland meet all of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less	Cat. II
than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).	Cat. II
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
CCC1 lethe wetlend 1 as an lenger and seems on 0 and 6 anthological formations on the forms (notes 11111 and 1111 M	Cat. II
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2	_ Gui
for the three aspects of function)?	
Yes = Category II No – Go to SC 6.3	Cat. III
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	
	Cat. IV
Category of wetland based on Special Characteristics	NIA
If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Wetland name or number $\underline{1-2}$

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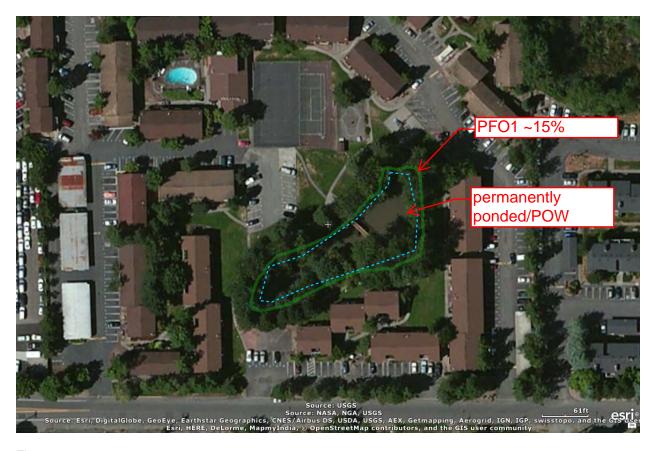


Figure 1-2-1



Figure 1-2-2

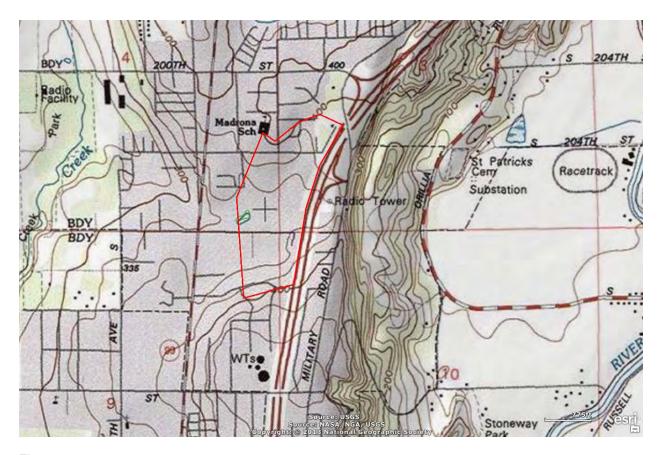
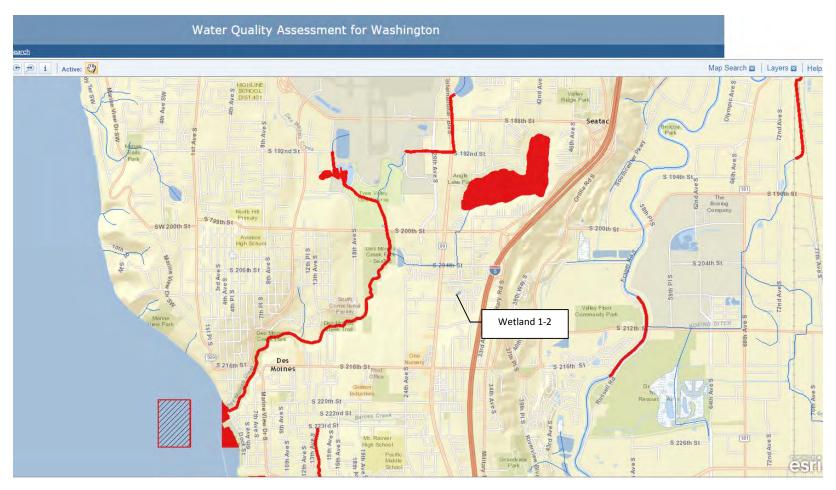


Figure 1-2-3



Figure 1-2-4

Wetland 1-2: 303(d) listed waters





http://www.ecy.wa.go

Vater Quality Improvement Projects (TMDLs)

'ater Quality Improvement > Water Quality Improvement Projects by WRIA 9: Duwamish-Green

VRIA 9: Duwamish-Green

ne following table lists overview information for water quality improvement projects (including total maximum daily loads, or TMDLs) for this water resource inventory area (WRIA). Please use links (where available) for more information on a project.

0 MILES 08 09 07 39 MILES 07 39

Counties

• King

Waterbody Name	Pollutants	Status**	TMDL Lead
Duwamish and Lower Green River	Ammonia-N	Approved by EPA	<u>Joan Nolan</u> 425-649-4425
Fauntleroy Creek	Fecal Coliform	Approved by EPA Has an implementation plan	<u>Joan Nolan</u> 425-649-4425
Fenwick Lake	Total Phosphorus	Approved by EPA (1993, Clean Lakes Program) Category 5, 2008 Water Quality Assessment	<u>Tricia Shoblom</u> 425-649-7288
Green River and Newaukum Creek	Temperature Dissolved Oxygen	Green River TMDL Approved by EPA Newaukum Creek TMDL Approved by EPA Has an implementation plan	<u>Joan Nolan</u> 425-649-4425
Lake Sawyer	Total Phosphorus	Approved by EPA Has an implementation plan	<u>Tricia Shoblom</u> 425-649-7288
Soos Creek	Fecal Coliform	Under development	<u>Dave Garland</u> 425-649-7031
	Aquatic Habitat Dissolved Oxygen Temperature	-	<u>Joan Nolan</u> 425-649-4425

^{**} Status will be listed as one of the following: Approved by EPA, Under Development or Implementation

For more information about WRIA 9:

- $\bullet \;\; \underline{\text{Waterbodies in WRIA 9}} \; \text{-} \; \text{using the Water Quality Assessment Query Tool}$
- Watershed Information for WRIA 9

Back to top of page

Last updated June 2014

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^{*} The Department of Ecology and other state resource agencies frequently use a system of 62 "Water Resource Inventory Areas" or "WRIAS" to refer to the state's major watershed basins.

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	2-1	Date of site	visit: 3/21/13
Rated by P Togher	Trained by Ecology?	Yes √ No Da	ate of training 5/2005
SEC: 9 TWNSHP: 22N RNGE: 4E	Is S/T/R in Appendix D	? Yes No <u></u> ✓	/ —
Map of wetland unit:	Figure $\frac{2}{2}$ Estima	ted size 0.36 ac	<u> </u>
SUM	MARY OF RATI	NG	
Category based on FUNCTIONS	provided by wetland	l	
I II III_✓ IV			
Cotogory I - Sooro > -70	Score for Water (Quality Functions	16
Category I = Score >=70 Category II = Score 51-69	Score for Hydr	ologic Functions	20
Category III = Score 30-50	Score for H	Habitat Functions	
Category IV = Score < 30			
	TOTAL SCO.	te for Functions	44
Category based on SPECIAL CH I II Does not Appl Final Category (choose)	ly_✓		III
	information about the v		
Wetland Unit has Special		HGM Class	
Characteristics Estuarine	Depression	for Rating	./
Natural Heritage Wetland		lai	<u> </u>
Bog	Lake-fring	e	
Mature Forest	Slope	<u>, -</u>	
Old Growth Forest	Flats		
Coastal Lagoon	Freshwate	r Tidal	
Interdunal			

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)		NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? ✓ The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
NO – go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
<u>natural outlet.</u>
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points	
	WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)	
	improve water quality	per box)	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure	
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"]	3	
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS		
	definitions)	0	
D	YES points = 4		
	NO $points = 0$		
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure	
_	Wetland has persistent, ungrazed, vegetation $> 95\%$ of area points $= 5$	5	
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$		
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$		
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$		
	Map of Cowardin vegetation classes		
	D1.4 Characteristics of seasonal ponding or inundation.	Figure	
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out		
	sometime during the year. Do not count the area that is permanently ponded. Estimate		
	area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4		
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2		
	Area seasonally pended is $< \frac{1}{4}$ total area of wetland points = 0		
	Map of Hydroperiods		
D		8.00	
D	D 2. Does the wetland unit have the opportunity to improve water quality?	(see p. 44)	
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other	multiplier Yes	
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	40.00	
D	Add score to table on p. 1	16.00	

D	Depressional and Flats Wetlands	Points (only 1 score
	HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3
D	Total for D 3 Add the points in the boxes above	10
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other	multiplier
	YES multiplier is 2 NO multiplier is 1	Yes
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	20

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			Points (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?			
H 1. Does the wetland unit have the potential to provide habitat for many species? H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each class is ½ acre or more than 10% of the area if unit is smaller than 2.5 acres. Aquatic bed Emergent plants Scrub/shrub (areas where shrubs have >30% cover) Forested (areas where trees have >30% cover) If the unit has a forested class check if: The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon			Figure 1 Struc. 0
Add the number of vegetation structures that qualify. If Map of Cowardin vegetation classes	4 structures or more 3 structures 2 structures 1 structure	points = 4 points = 2 points = 1 points = 0	
H 1.2. <u>Hydroperiods</u> (see p. 73) Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ½ acre to count. (see text for descriptions of hydroperiods)			2 types
Permanently flooded or inundated Seasonally flooded or inundated ✓ Occasionally flooded or inundated ✓ Saturated only Permanently flowing stream or river in, or adja Seasonally flowing stream in, or adjacent to, the		points = 3 points = 2 point = 1 points = 0	1
Lake-fringe wetland = 2 pointsFreshwater tidal wetland = 2 points Map of hydroperiods			
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland the of the same species can be combined to meet the size You do not have to name the species. Do not include Eurasian Milfoil, reed canarygram If you counted: List species below if you want to:	e threshold) ess, purple loosestrife, Cana > 19 species 5 - 19 species	•	<5 sp.
PHAR, TYLA	< 5 species	points – U	

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	1
Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants 	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	2

Comments

H 2. Does the wetland unit have the opportunity to provide hab	itat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of buffer of wetland criterion that applies to the wetland is to be used in the rating. See text fo "undisturbed."	r definition of	2
 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky are of circumference. No structures are within the undisturbed part undisturbed also means no-grazing, no landscaping, no daily hun — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky are 50% circumference. — 50 m (170ft) of relatively undisturbed vegetated areas, rocky are circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky are circumference, 	of buffer. (relatively nan use) Points = 5 eas, or open water > Points = 4 as, or open water >95% Points = 4 eas, or open water > 25% Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky are	_	
50% circumference. If buffer does not meet any of the criteria ab		
 No paved areas (except paved trails) or buildings within 25 m (80 circumference. Light to moderate grazing, or lawns are OK. No paved areas or buildings within 50m of wetland for >50% circumference. 	$\mathbf{Points} = 2$	
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the fields, paving, basalt bedrock extend to edge of wetland 	circumference (e.g. tilled Points = 0 .	
 Buffer does not meet any of the criteria above. 	Points = 1	
Aerial photo showing	buffers	
H 2.2 <u>Corridors and Connections</u> (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroker (either riparian or upland) that is at least 150 ft wide, has at least 30 or native undisturbed prairie, that connects to estuaries, other wetla	% cover of shrubs, forest nds or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corria	lors, heavily used gravel	No
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroker (either riparian or upland) that is at least 50ft wide, has at least 30%	cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed upla acres in size? OR a Lake-fringe wetland, if it does not have an un the question above? YES = 2 points (go to H 2.3) NO = H	disturbed corridor as in	No
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR		Yes
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0	points	

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	INOTIE
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	0
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that			
best fits) (see p. 84)			
There are at least 3 other wetlands within ½ mile, and the connections between them are			
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some			
boating, but connections should NOT be bisected by paved roads, fill, fields, or other			
development. points = 5			
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe			
wetlands within $\frac{1}{2}$ mile points = 5			
✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are			
disturbed points = 3			
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe			
wetland within $\frac{1}{2}$ mile points = 3			
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2			
There are no wetlands within $\frac{1}{2}$ mile. points = 0			
TIA TOTAL C			
H 2. TOTAL Score - opportunity for providing habitat	6		
Add the scores from H2.1,H2.2, H2.3, H2.4	ii		
TOTAL for H 1 from page 14	2		
	<u> -</u>		
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on			
p. 1	8		
-			

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? 2. YES = Category INo ✓ Is not a bog for purpose of rating

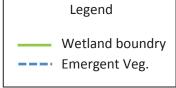
Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
 At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. The wetland is larger than 1/10 acre (4350 square feet) 	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	







WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):2-	Date of site visit: $\frac{3/21/13}{2}$		
Rated by P Togher Trained	ed by Ecology? Yes ✓No Date of training 5/2005		
SEC: 9 TWNSHP: $22N$ RNGE: $4E$ Is S/T/R	in Appendix D? Yes No No		
Map of wetland unit: Figure 2	Estimated size ~0.1 ac		
SUMMARY	OF RATING		
Category based on FUNCTIONS provide	ed by wetland		
I II III_✓ IV			
Category I = Score >=70	core for Water Quality Functions 16		
Category II = Score 51-69	Score for Hydrologic Functions 20		
Category III = Score 30-50	Score for Habitat Functions 8		
Category IV = Score < 30	0		
	TOTAL score for Functions 44		
Category based on SPECIAL CHARAC I II Does not Apply ✓ Final Category (choose the "			
Summary of basic information about the wetland unit			
Wetland Unit has Special	Wetland HGM Class		
Characteristics	used for Rating		
Estuarine Natural Heritage Wetland	Depressional ✓ Riverine		
Bog	Lake-fringe		
Mature Forest	Slope		
Old Growth Forest	Flats		
Coastal Lagoon	Freshwater Tidal		
Interdunal			

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? ✓ The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 \bigvee YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure	
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area points = 1 Wetland has persistent, ungrazed vegetation < 1/10 of area points = 0	Figure	
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2		
D	Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods Total for D 1 Add the points in the boxes above	8.00	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1		
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	16.00	

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3
D	Total for D 3 Add the points in the boxes above	10
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems	
	— Other YES multiplier is 2 NO multiplier is 1	Yes
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	20

These questions apply to wetlands of all He HABITAT FUNCTIONS - Indicators that unit fund		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to	provide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defin	ned by Cowardin)- Size thresh	hold for each	1 Struc.
class is ½ acre or more than 10% of the area if unit is smaller than 2.5 acres.			
Aquatic bed			0
<u>✓</u> Emergent plants			
Scrub/shrub (areas where shrubs have >30			
Forested (areas where trees have >30% co	ver)		
If the unit has a forested class check if:		1	
The forested class has 3 out of 5 strata (ca			
moss/ground-cover) that each cover 20		n	
Add the number of vegetation structures that qualify.	4 structures or more	points = 4	
	3 structures	points $= 4$ points $= 2$	
Map of Cowardin vegetation classes	2 structures	points $= 2$ points $= 1$	
	1 structure	points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73)	1 Structure	pomis	Figure
Check the types of water regimes (hydroperiods)	present within the wetland. T	The water	
regime has to cover more than 10% of the wetland			2 types
descriptions of hydroperiods)	,		4
Permanently flooded or inundated	4 or more types present	points = 3	1
Seasonally flooded or inundated	3 types present	points = 2	
Occasionally flooded or inundated	2 types present	point = 1	
Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or a			
Seasonally flowing stream in, or adjacent to	, the wetland		
Lake-fringe wetland = 2 points	Maria		
Freshwater tidal wetland = 2 points	Map of hydi	operiods	
H 1.3. Richness of Plant Species (see p. 75)			<5 sp.
Count the number of plant species in the wetland		ferent patches	<υ sp.
of the same species can be combined to meet the	size threshold)		0
You do not have to name the species.	anges numla laggestrife Car	adian Thistle	
Do not include Eurasian Milfoil, reed canary, If you counted:	> 19 species	points $= 2$	
List species below if you want to:	5 - 19 species	points = 2 points = 1	
List species below if you want to.	< 5 species	points $= 1$ points $= 0$	
PHAR, TYLA	(b species	points	

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	
	0
None = 0 points $Low = 1$ point $Moderate = 2$ points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large downed weeds debrie within the wetland (stin diemeter and 6 ft lang)	1
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) ✓ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas	
that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	2

Comments

H 2. Does the wetland unit have the opportunity to pro	ovide habitat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of buffer	of wetland unit. The highest scoring	
criterion that applies to the wetland is to be used in the rating.		2
"undisturbed."		
 — 100 m (330ft) of relatively undisturbed vegetated areas 	s, rocky areas, or open water >95%	
of circumference. No structures are within the undistr	· · · · · · · · · · · · · · · · · · ·	
undisturbed also means no-grazing, no landscaping, no	o daily human use) $Points = 5$	
— 100 m (330 ft) of relatively undisturbed vegetated area	s, rocky areas, or open water >	
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas	, rocky areas, or open water >95%	
circumference.	Points = 4	
 — 100 m (330ft) of relatively undisturbed vegetated areas 	s, rocky areas, or open water > 25%	
circumference, .	Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas	, rocky areas, or open water for >	
50% circumference.	Points = 3	
If buffer does not meet any of the	criteria above	
No paved areas (except paved trails) or buildings with	in 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns ar	e OK. $Points = 2$	
 No paved areas or buildings within 50m of wetland for 	c >50% circumference.	
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than from the contract of	95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetlan	d $Points = 0$.	
 Buffer does not meet any of the criteria above. 	Points = 1	
	to showing buffers	
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed an		
(either riparian or upland) that is at least 150 ft wide, has		
or native undisturbed prairie, that connects to estuaries, or		
uplands that are at least 250 acres in size? (dams in ripa		No
roads, paved roads, are considered breaks in the corrido		l
YES = 4 points (go to H 2.3)	NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturbed an		
(either riparian or upland) that is at least 50ft wide, has a		l _{N1} .
forest, and connects to estuaries, other wetlands or undis	-	No
acres in size? OR a Lake-fringe wetland, if it does not the question shows?	have an undisturbed corridor as in	
the question above? YES = 2 points (go to $H 2.3$)	NO = H 2.2.3	
H 2.2.3 Is the wetland:	110 – 11 2.2.3	
within 5 mi (8km) of a brackish or salt water estu	ary OR	Yes
within 3 mi of a large field or pasture (>40 acres)	•	
within 1 mi of a lake greater than 20 acres?		
YES = 1 point	NO = 0 points	
TDD - I Polit	110 - 0 points	

HO2N was all and the standard standards in the latest the WDFW (see a see all a see all a	
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	0
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4 TOTAL for H 1 from page 14 2	H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	3
TOTAL C 111 C 14		6
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on		

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ✓ YES ___ - contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ✓

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO **✓** not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3

 No go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3

No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Is a bog for purpose of rating No

No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

 SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. 	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
 Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is 	
saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	
YES = Go to SC 5.1 NO \checkmark not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet)	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	I N/ A
If you answered NO for all types enter "Not Applicable" on p.1	





Figure 2-2. Wetland 2-2



WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): 5-1	Date of site visit: 3/14 & 3/25/14	
Rated by L Danielski Train	ined by Ecology? Yes ✓ No Date of training 2005	
SEC: 9 TWNSHP: 22N RNGE: 5E Is S/T	√R in Appendix D? Yes No ✓	
Map of wetland unit: Figure	Estimated size 0.8 AC	
SUMMAR	AY OF RATING	
Category based on FUNCTIONS provi	ded by wetland	
I II III_✓ IV		
	Score for Water Quality Functions 20	
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 7	
Category III = Score 30-50		
Category IV = Score < 30	TOTAL score for Functions 32	
Category based on SPECIAL CHARA	CTERISTICS of wetland	
I II Does not Apply ✓		
Final Category (choose the "highest" category from above)		
Summary of basic information about the wetland unit		
Wetland Unit has Special		
Characteristics	used for Rating	
Estuarine	Depressional ✓	
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	

Freshwater Tidal

Check if unit has multiple HGM classes present

Coastal Lagoon

None of the above

Interdunal

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VNO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? ✓ The wetland is on a slope (<i>slope can be very gradual</i>), ✓ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 $\boxed{\checkmark}$ YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)		
D	improve water quality D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)		
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure		
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"]			
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	1		
D	definitions) YES NO points = 4 points = 0	0		
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure		
D	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$ Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$	5		
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$ Map of Cowardin vegetation classes			
	D1.4 Characteristics of seasonal ponding or inundation.	Figure		
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0			
	Map of Hydroperiods			
D	Total for D 1 Add the points in the boxes above	10.00		
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1			
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	20.00		
	Add score to table on p. 1	20.00		

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3
D	Total for D 3 Add the points in the boxes above	7
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise	
	flow into a river or stream that has flooding problems — Other	multiplier
	YES multiplier is 2 NO multiplier is 1	No
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	7

These questions apply to wetlands of all HG HABITAT FUNCTIONS - Indicators that unit function		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to p	rovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each			1 Struc.
class is ¹ / ₄ acre or more than 10% of the area if unitAquatic bed	is smaller than 2.5 acres.		0
Emergent plants			
Scrub/shrub (areas where shrubs have >30%	cover)		
Forested (areas where trees have >30% cove	r)		
If the unit has a forested class check if:			
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20% Add the number of vegetation structures that qualify. If		n	
Add the number of vegetation structures that qualify. If	4 structures or more	points $= 4$	
Man of Cowardin variation along	3 structures	points $= 4$ points $= 2$	
Map of Cowardin vegetation classes	2 structures	points $= 1$	
	1 structure	points = 0	
H 1.2. Hydroperiods (see p. 73)			Figure
Check the types of water regimes (hydroperiods) pr			2 types
regime has to cover more than 10% of the wetland o	$r^{1/4}$ acre to count. (see text	for	_ 3,1,33
descriptions of hydroperiods)	4		
Permanently flooded or inundatedSeasonally flooded or inundated	4 or more types presen	_	
Occasionally flooded or inundated	3 types present 2 types present	point = 1	
Saturated only	1 type present	point = 1 $points = 0$	1
Permanently flowing stream or river in, or ad	• • •	Politio	'
Seasonally flowing stream in, or adjacent to,			
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hyd	roperiods	
H 1.3. Richness of Plant Species (see p. 75)			4F 0D
Count the number of plant species in the wetland the		fferent patches	<5 sp.
of the same species can be combined to meet the six	ze threshold)		0
You do not have to name the species.		J: Tl.: J	
Do not include Eurasian Milfoil, reed canarygr If you counted:	> 19 species	points = 2	
List species below if you want to:	5 - 19 species	points = 2 points = 1	
Zist species below if you want to.	< 5 species	points = 0	
	1	•	

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
None = 0 points Low = 1 point Moderate = 2 points	
	0
High = 3 points [riparian braided channels]	
NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	2
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland	
(>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ½ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	3

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 Buffers (see p. 80)	Figure	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	I Iguio	
criterion that applies to the wetland is to be used in the rating. See text for definition of		
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer. (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, . Points = 3	1	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	'	
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points $= 2$		
Heavy grazing in buffer.Points = 1		
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled		
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.		
\checkmark Buffer does not meet any of the criteria above. Points = 1		
Aerial photo showing buffers		
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest		
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel		
roads, paved roads, are considered breaks in the corridor).	No	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in		
the question above?		
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$		
H 2.2.3 Is the wetland:	Yes	
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0 points		

Total for page 2

	1
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	0
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	
The state of the transfer and area content in question in a green in the state of t	I .

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	0
There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe	
wetlands within ½ mile points = 5	
There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	2
TOTAL for H 1 from page 14	3
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

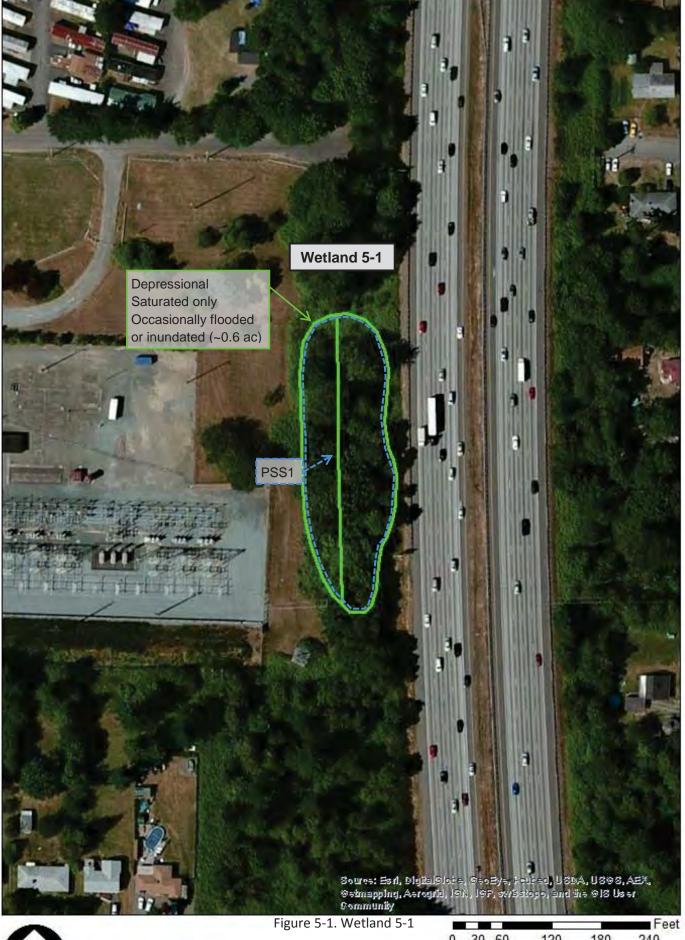
Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ YES ✓ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ___ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? No Is not a bog for purpose of rating 2. YES = Category ICat. I

 SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. 	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NOnot a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
 At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. The wetland is larger than 1/10 acre (4350 square feet) 	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	Not
Choose the "highest" rating if wetland falls into several categories, and record on p. 1.	Applicable
If you answered NO for all types enter "Not Applicable" on p.1	





0 30 60 120 180 240

Legend Wetland Scrub/Shrub Veg.

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	6-1 Date of site visit: 3/22/13		
Rated by Lisa Danielski Tra	ined by Ecology? Yes ✓ No Date of training 2005		
SEC: <u>16</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u> Is S/T	7/R in Appendix D? Yes No ✓		
Map of wetland unit: Figure	Estimated size 624 ft^2		
SUMMAR	AY OF RATING		
Category based on FUNCTIONS provi	ded by wetland		
I II III IV.✓			
Category I = Score >=70	Score for Water Quality Functions 12		
Category II = Score 51-69	Score for Hydrologic Functions 8		
Category III = Score 30-50 Score for Habitat Functions 9			
Category IV = Score < 30	TOTAL score for Functions 29		
Category based on SPECIAL CHARA I II Does not Apply_✓_ Final Category (choose the			
Summary of basic information about the wetland unit			
	Wetland HGM Class		
Characteristics Estuarine	used for Rating		
Natural Heritage Wetland	Depressional		
Bog	Lake-fringe		
Mature Forest	Slope		
Old Growth Forest	Flats		
Coastal Lagoon	Freshwater Tidal		
Interdunal			

None of the above

Check if unit has multiple HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
 Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded ? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).
✓ NO - go to 5 YES – The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 $\boxed{\checkmark}$ YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)			
D	improve water quality D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)			
D					
	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) points = 3	Figure			
D	Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points $= 3$	3			
	Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1				
	Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and				
	no obvious natural outlet and/or outlet is a man-made ditch (If distribute not normal outlet Applies treat unit as "intermittently flowing")				
	(If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing				
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	1			
	definitions)	0			
D	YES points = 4				
	NO $points = 0$				
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure			
Б	Wetland has persistent, ungrazed, vegetation $>$ = 95% of area points = 5	3			
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$				
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$				
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points = 0				
	Map of Cowardin vegetation classes	Figure			
	D1.4 Characteristics of seasonal ponding or inundation. This is the great of the wetland unit that is pended for at least 2 months, but dries out	0			
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate				
	area as the average condition 5 out of 10 yrs.				
	Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4				
	Area seasonally pended is $> \frac{1}{4}$ total area of wetland points = 2				
	Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0				
	Map of Hydroperiods	<u> </u>			
D	Total for D 1 Add the points in the boxes above	6.00			
D	D 2. Does the wetland unit have the opportunity to improve water quality?	(see p. 44)			
	Answer YES if you know or believe there are pollutants in groundwater or surface water				
	coming into the wetland that would otherwise reduce water quality in streams, lakes or				
	groundwater downgradient from the wetland. <i>Note which of the following conditions</i>				
	provide the sources of pollutants. A unit may have pollutants coming from several				
	sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft				
	— Grazing in the wetland or within 130 it — Untreated stormwater discharges to wetland				
	Tilled fields or orchards within 150 ft of wetland				
	 A stream or culvert discharges into wetland that drains developed areas, residential areas, 				
	farmed fields, roads, or clear-cut logging				
	Residential, urban areas, golf courses are within 150 ft of wetland				
	Wetland is fed by groundwater high in phosphorus or nitrogen				
	— Other YES multiplier is 2 NO multiplier is 1				
_					
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	12.00			
	Add score to table on p. 1				

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	0
D	Total for D 3 Add the points in the boxes above	4
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems Wetland drains to a river or stream that has flooding problems Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems	(see p. 49)
	— Other YES multiplier is 2 NO multiplier is 1	Yes
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	8

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			
H 1. Does the wetland unit have the <u>potential</u> to pr			per box)
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined	l by Cowardin)- Size thresh	old for each	1 Struc.
class is $^{1}\!\!/4$ acre or more than 10% of the area if unit is smaller than 2.5 acres.			
Aquatic bed			
Emergent plants			
✓ Scrub/shrub (areas where shrubs have >30%			
Forested (areas where trees have >30% cover)		
If the unit has a forested class check if:			
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20%			
Add the number of vegetation structures that qualify. If		mainta — 1	
	4 structures or more	points = 4 $points = 2$	
Map of Cowardin vegetation classes	3 structures 2 structures	points $= 2$ points $= 1$	
	1 structure	points = 1 $points = 0$	
H 1.2. <u>Hydroperiods</u> (see p. 73)	1 Structure	points = 0	Figure
Check the types of water regimes (hydroperiods) pre	esent within the wetland Th	he water	
regime has to cover more than 10% of the wetland or			1 type
descriptions of hydroperiods)	, , dere to comm (see tem j		
Permanently flooded or inundated	4 or more types present	points = 3	0
Seasonally flooded or inundated	3 types present	points $= 2$	
Occasionally flooded or inundated	2 types present	point = 1	
Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or adja			
Seasonally flowing stream in, or adjacent to, the	ne wetland		
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hydro	periods	
H 1.3. Richness of Plant Species (see p. 75)			<i>.</i> F. o.o.
Count the number of plant species in the wetland that		erent patches	<5 sp.
of the same species can be combined to meet the size	e threshold)		0
You do not have to name the species.			
Do not include Eurasian Milfoil, reed canarygra			
If you counted:	•	points = 2	
List species below if you want to:	*	points = 1	
Salmonberry	< 5 species	points = 0	

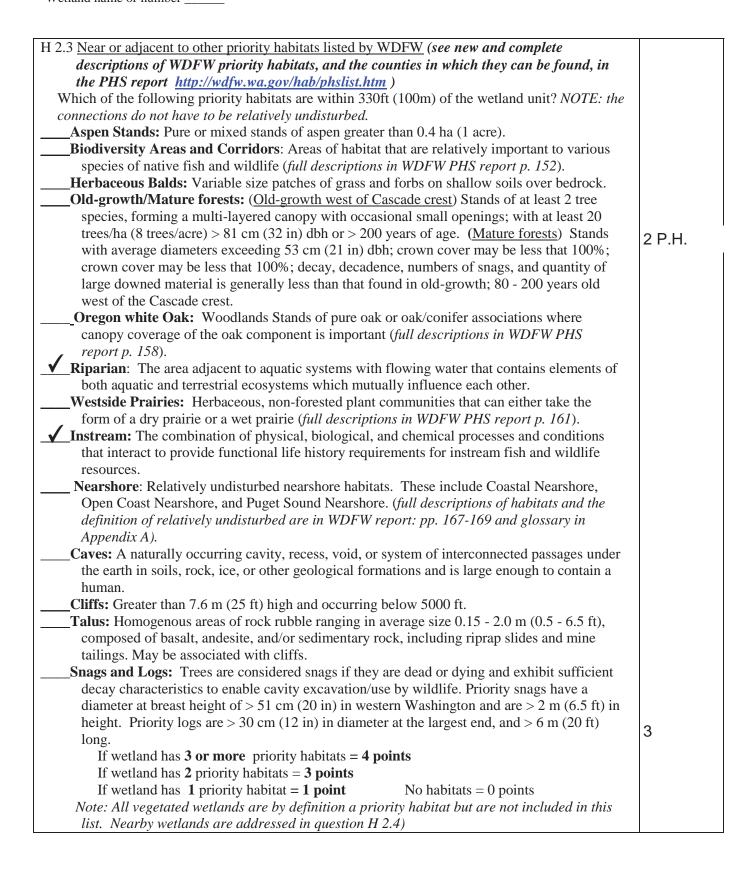
Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0
Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) 	
Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	0

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many specie	es?
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest score	
criterion that applies to the wetland is to be used in the rating. See text for definition of	^{ring} 3
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95	5%
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points $= 5$	i
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	1
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >959	%
circumference. Points = 4	ļ
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25	5%
circumference, . Points = 3	
✓ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	3
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	2
— No paved areas or buildings within 50m of wetland for >50% circumference.	
Light to moderate grazing, or lawns are OK. Points = 2	
— Heavy grazing in buffer. Points =	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. ti	
fields, paving, basalt bedrock extend to edge of wetland Points =	
— Buffer does not meet any of the criteria above. Aerial photo showing buffers Points =	1
H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, for	rest
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used grav	vel No
roads, paved roads, are considered breaks in the corridor).	140
YES = 4 points $(go to H 2.3)$ NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	_
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	n
the question above?	
YES = 2 points (go to H 2.3) NO = H 2.2.3	
H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR	Yes
within 3 mi (8km) of a brackish of saft water estuary OR within 3 mi of a large field or pasture (>40 acres) OR	1.00
within 1 mi of a lake greater than 20 acres?	
YES = 1 point NO = 0 points	
125 1 Pome	

Total for page 4



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	2
There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5	
There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	9
TOTAL for H 1 from page 14	0
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	9

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support

Cat. I

state Threatened, Endangered, or Sensitive plant species.

SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR)

S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____

YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2

NO <u>✓</u>

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO **✓** not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3

 No go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3

No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Is a bog for purpose of rating

No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

 SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. 	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion	
of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	

NO = Category II

shrub, forest, or un-grazed or un-mowed grassland.

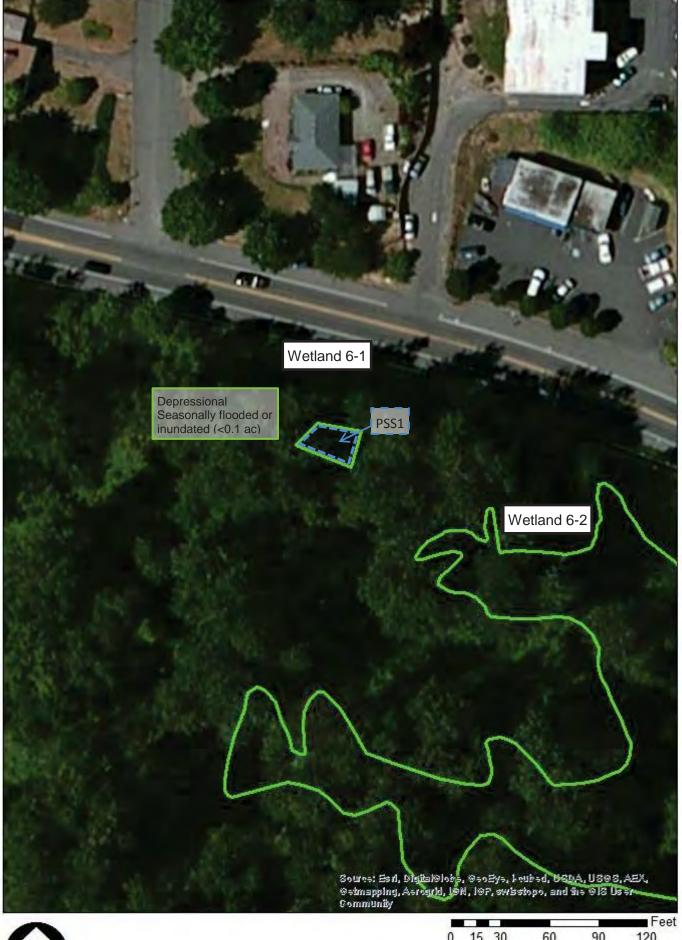
— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	I W / A
If you answered NO for all types enter "Not Applicable" on p.1	





0 15 30

WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Wetland 6-2	Date of site visit: 3/12 and 3/25/14	
Rated by L Danielski Train	ned by Ecology? Yes ✓ No Date of training 2005	
SEC: <u>16</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u> Is S/T/	R in Appendix D? Yes No_	
Map of wetland unit: Figure	Estimated size 0.7 ac	
SUMMAR	Y OF RATING	
Category based on FUNCTIONS provide	led by wetland	
I II IV_✓		
Cotton and Control 70	Score for Water Quality Functions 4	
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 10	
Category III = Score 30-50	Score for Habitat Functions 10	
Category IV = Score < 30	TOTAL score for Functions 24	
Category based on SPECIAL CHARAC	CTERISTICS of wetland	
I II Does not Apply ✓		
Final Category (choose the "highest" category from above)		
Summary of basic information about the wetland unit		
Wetland Unit has Special	Wetland HGM Class	
Characteristics Estuarine	used for Rating Depressional	
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope ✓	

Flats

Freshwater Tidal

Check if unit has multiple HGM classes present

Old Growth Forest

Coastal Lagoon

None of the above

Interdunal

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts pe thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? ✓ NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? ✓ The wetland is on a slope (<i>slope can be very gradual</i>), ✓ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\sqrt{NO} NO – go to 7 \sqrt{YES} – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% points = 2 Slope is 2% - 5% points = 1 Slope is greater than 5%	1
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	No - 0
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1 Add the points in the boxes above	2
S	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. Grazing in the wetland or within 150ft Untreated stormwater discharges to wetland Tilled fields, logging, or orchards within 150 feet of wetland	(see p.67)
	Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1	multiplier Yes
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	4

S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream erosion	Points (only 1 score per box)
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. points = 6 Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	3
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2 NO points = 0	Yes
S	Add the points in the boxes above	5
S	S 4. Does the wetland have the opportunity to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and erosive flows? Note which of the following conditions apply. Wetland has surface runoff that drains to a river or stream that has flooding problems Other (Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam) YES multiplier is 2 NO multiplier is 1	(see p. 70) Massey Creek documented as stream with flood problems multiplier Yes
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 <i>Add score to table on p. 1</i>	10

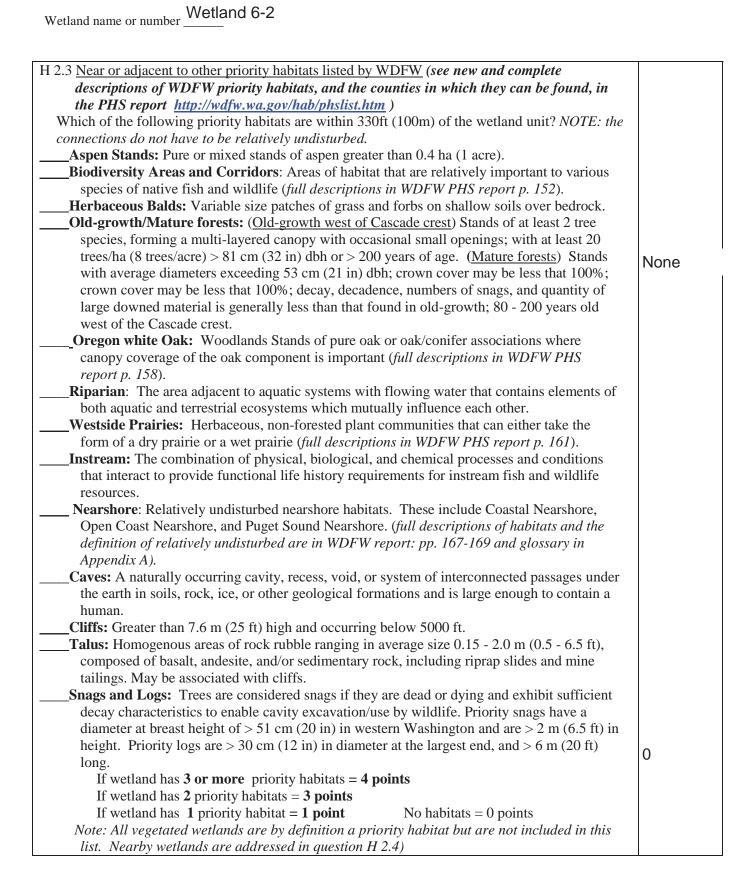
These questions apply to wetlands of all HGR HABITAT FUNCTIONS - Indicators that unit functions		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to pr	rovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined		old for each	2 Struc.
class is ¹ / ₄ acre or more than 10% of the area if unit i	s smaller than 2.5 acres.		1
Aquatic bed Emergent plants			'
Scrub/shrub (areas where shrubs have >30%	cover)		
Forested (areas where trees have >30% cover			
If the unit has a forested class check if:			
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20%		l	
Add the number of vegetation structures that qualify. If	-	noints - 1	
	4 structures or more 3 structures	points = 4 $points = 2$	
Map of Cowardin vegetation classes	2 structures	points = 2 points = 1	
	1 structure	points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73)		1	Figure
Check the types of water regimes (hydroperiods) pr			3 types
regime has to cover more than 10% of the wetland of	r ¼ acre to count. (see text j	For	o types
descriptions of hydroperiods)			
Permanently flooded or inundated	4 or more types present	points $= 3$	
Seasonally flooded or inundated	3 types present	points = 2	
Occasionally flooded or inundatedSaturated only	2 types present 1 type present	point = 1 $points = 0$	2
Permanently flowing stream or river in, or adj		points = 0	_
Seasonally flowing stream in, or adjacent to, t			
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hydro	operiods	
H 1.3. Richness of Plant Species (see p. 75)			5 40
Count the number of plant species in the wetland th	at cover at least 10 ft ² . (diff	^f erent patches	5 -19 sp.
of the same species can be combined to meet the siz	e threshold)		1
You do not have to name the species.			
Do not include Eurasian Milfoil, reed canarygr			
If you counted: <i>List species below if you want to:</i>	> 19 species 5 - 19 species	points = 2 points = 1	
List species below if you want to.	< 5 species	points = 1 points = 0	
	ve species	Politic	
COSE, POBA, GLEL, RUSP, CAOB, RARE			

Total for page 4

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
None = 0 points Low = 1 point Moderate = 2 points	
	0
High = 3 points [riparian braided channels]	
NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	2
Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	6

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 <u>Buffers</u> (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	
criterion that applies to the wetland is to be used in the rating. See text for definition of	
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. $Points = 4$	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . $Points = 3$	1
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
— No paved areas or buildings within 50m of wetland for >50% circumference.	
Light to moderate grazing, or lawns are OK. $Points = 2$	
Heavy grazing in buffer.Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland $\mathbf{Points} = 0$.	
✓ Buffer does not meet any of the criteria above. Points = 1	
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81)	
H 2.2 Contraors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	NI-
roads, paved roads, are considered breaks in the corridor).	No
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	
the question above?	
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	Yes
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres?	
YES = 1 point NO = 0 points	

Total for page 2



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	2
There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe	
wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	4
TOTAL for H 1 from page 14 Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	6
p. 1	10

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D 🗸 or accessed from WNHP/DNR web site ____ NO 🗸 YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? 2. YES = Category INo ✓ Is not a bog for purpose of rating Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
 At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. The wetland is larger than 1/10 acre (4350 square feet) 	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	I N/ A
If you answered NO for all types enter "Not Applicable" on p.1	





0 30 60 120 180 240

Legend

Wetland Boarder --- Scrub/Shrub Veg.

WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of we	etland (if known):	6-3	3	Date of site visit	.: 3/22/13 :
Rated by Lis	sa Danielski	Traine	d by Ecology? Yesy	No Date o	f training 2005
SEC: 16 T	WNSHP: 22N RNGE	: <u>4E</u> Is S/T/R	in Appendix D? Ye	s No <u> </u>	
	Map of wetland	unit: Figure <u>6</u>	Estimated s	624 sq.ft.	
	\$	SUMMARY	OF RATING		
Category	based on FUNCT	IONS provide	d by wetland		
I	_ II III :	IV <u>√</u>			
Catagory	I = Score >=70	Sc	ore for Water Qualit	y Functions 8	3
	II = Score 51-69		Score for Hydrologi	c Functions	3
"	III = Score 30-50		Score for Habita		
Category	IV = Score < 30		TOTAL score for	_	22
•	based on SPECIA _ II Does not		ERISTICS of w	etland	
1	Final Categor	y (choose the "h	ighest" category fro	Jili above)	V
	Wetland Unit has S	Special	Wetland HG		
	Characteristics		used for R	ating	
	Estuarine	Votlond	Depressional	✓	
	Natural Heritage V	vetiand	Riverine		
	Bog Mature Forest		Lake-fringe Slope		
	Old Growth Forest	+	Flats		
	Coastal Lagoon		Freshwater Tid	al	
	Interdunal		1105HWater 110		1

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts periods)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
3. Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VNO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 \bigvee YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points	
	WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)	
	improve water quality	per box)	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?		
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure	
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"]		
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS		
	definitions)	0	
D	YES points = 4		
	NO $points = 0$		
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure	
_	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$	1	
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$	'	
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$		
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$		
	Map of Cowardin vegetation classes		
	D1.4 Characteristics of seasonal ponding or inundation.	Figure	
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out		
	sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.		
	Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4		
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2		
	Area seasonally pended is $< \frac{1}{4}$ total area of wetland points = 0		
	Map of Hydroperiods		
D	Total for D 1 Add the points in the boxes above	4.00	
D	D 2. Does the wetland unit have the opportunity to improve water quality?	(see p. 44)	
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1	multiplier Yes	
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	0.00	
D	Add score to table on p. 1	8.00	

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	0
D	Total for D 3 Add the points in the boxes above	4
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems Wetland drains to a river or stream that has flooding problems Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems	(see p. 49) Massey Creek has flooding problems multiplier
	— Other	Yes
D	YES multiplier is 2 NO multiplier is 1 TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	8

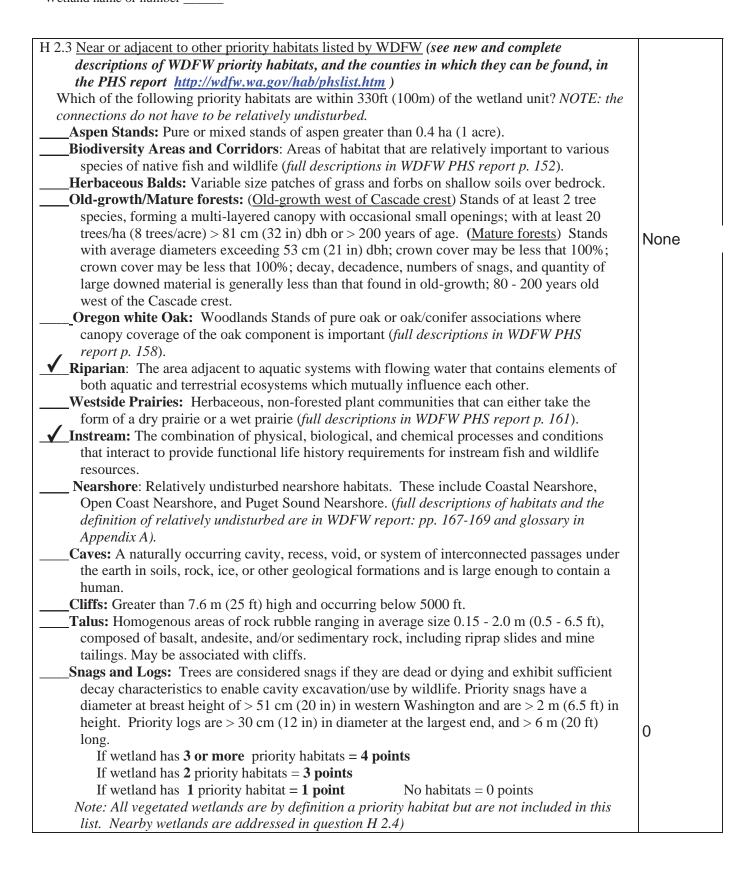
These questions apply to wetlands of all HO HABITAT FUNCTIONS - Indicators that unit functions		t habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to p	provide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as define	ed by Cowardin)- Size thre	shold for each	1 Struc.
class is ¼ acre or more than 10% of the area if unit	is smaller than 2.5 acres.		
Aquatic bed			0
Emergent plants			
Scrub/shrub (areas where shrubs have >30%			
Forested (areas where trees have >30% cov	er)		
If the unit has a forested class check if:	ony ouh conony charles h	orbosous	
The forested class has 3 out of 5 strata (can moss/ground-cover) that each cover 20%			
Add the number of vegetation structures that qualify.		<i>J</i> 11	
That the number of vegetation structures that quality.	4 structures or more	points $= 4$	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
Map of Cowardin vegetation classes	2 structures	points $= 1$	
	1 structure	points = 0	
H 1.2. Hydroperiods (see p. 73)			Figure
Check the types of water regimes (hydroperiods) p			1 type
regime has to cover more than 10% of the wetland o	or ¼ acre to count. (see tex	t for	i type
descriptions of hydroperiods)			0
Permanently flooded or inundated	4 or more types presen		
Seasonally flooded or inundated	3 types presen	_	
Occasionally flooded or inundated	2 types present		
Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or ac Seasonally flowing stream in, or adjacent to,			
Seasonary flowing stream in, or adjacent to, Lake-fringe wetland = 2 points	the wettand		
Lake-fringe wettand = 2 points Freshwater tidal wetland = 2 points	Map of hyd	droperiods	
H 1.3. Richness of Plant Species (see p. 75)	map or my	3.000.1000	
Count the number of plant species in the wetland t	hat cover at least 10 ft ² (d	ifferent natches	<5 sp.
of the same species can be combined to meet the sa		ijjereni paicnes	_
You do not have to name the species.	ze mresnowy		0
Do not include Eurasian Milfoil, reed canaryg	rass, purple loosestrife, Co	anadian Thistle	
If you counted:	> 19 species	points = 2	
List species below if you want to:	5 - 19 species	points $= 1$	
Calmanhamm	< 5 species	points $= 0$	
Salmonberry			

Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	0
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat	0
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	I' I

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	
criterion that applies to the wetland is to be used in the rating. See text for definition of	3
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
✓ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
 No paved areas or buildings within 50m of wetland for >50% circumference. 	
Light to moderate grazing, or lawns are OK. Points = 2	
— Heavy grazing in buffer. Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland $\mathbf{Points} = 0$.	
— Buffer does not meet any of the criteria above. Points = 1	
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	No
roads, paved roads, are considered breaks in the corridor).	No
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	
the question above?	
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
H 2.2.3 Is the wetland:	Yes
within 5 mi (8km) of a brackish or salt water estuary OR	162
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres? YES = 1 point $NO = 0$ points	
1125 – 1 point NO – v points	1

Total for page 4



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile. There are no wetlands within ½ mile.	2
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	6
TOTAL for H 1 from page 14	0
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	6

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ____ or accessed from WNHP/DNR web site _____

YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ✓

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO _____ not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3

 No go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3 No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes-Is a bog for purpose of rating No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

- 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?
- 2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 acre (4350 square feet) 	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	



WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Wetland 6-4 Date of site visit: 3/12 and 3/25/14		
Rated by L Danielski T	rained by Ecology? Yes ✓ No Date of training 2005	
SEC: 16 TWNSHP: 22N RNGE: 4E Is S	S/T/R in Appendix D? Yes No ✓	
Map of wetland unit: Figu	re Estimated size 0.7ac	
SUMMA	RY OF RATING	
Category based on FUNCTIONS pro	vided by wetland	
I II IV_✓		
	Score for Water Quality Functions 4	
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 10	
Category III = Score 30-50		
Category IV = Score < 30	TOTAL score for Functions 26	
Category based on SPECIAL CHAR I II Does not Apply ✓ Final Category (choose the		
Summary of basic information about the wetland unit		
Wetland Unit has Special	Wetland HGM Class	
Characteristics	used for Rating	
Estuarine Natural Heritage Wetland	Depressional Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	

Coastal Lagoon

None of the above

Interdunal

Freshwater Tidal

Check if unit has multiple HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts pe thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? ✓ The wetland is on a slope (<i>slope can be very gradual</i>), ✓ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\sqrt{NO} NO – go to 7 \sqrt{YES} – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% points = 2 Slope is 2% - 5% points = 1 Slope is greater than 5%	1
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	No - 0
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1 Add the points in the boxes above	2
S	S 2. Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. Grazing in the wetland or within 150ft Untreated stormwater discharges to wetland Tilled fields, logging, or orchards within 150 feet of wetland	
	Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1	multiplier Yes
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 **Add score to table on p. 1**	4

S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream erosion	Points (only 1 score per box)
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. points = 6 Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	3
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2 NO points = 0	Yes
S	Add the points in the boxes above	5
S	S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive an erosive flows? Note which of the following conditions apply. Wetland has surface runoff that drains to a river or stream that has flooding problems Other (Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam) YES multiplier is 2 NO multiplier is 1	
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 <i>Add score to table on p. 1</i>	10

These questions apply to wetlands of all HG HABITAT FUNCTIONS - Indicators that unit functions		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to p	rovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as define	d by Cowardin)- Size thresh	hold for each	2 Struc.
class is ¼ acre or more than 10% of the area if unit	is smaller than 2.5 acres.		2 Oli do.
Aquatic bed			1
Emergent plants			
Scrub/shrub (areas where shrubs have >30%			
Forested (areas where trees have >30% cove	r)		
If the unit has a forested class check if:		.1	
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20% Add the number of vegetation structures that qualify. If		Π	
Add the humber of vegetation structures that qualify. If	4 structures or more	points = 4	
	3 structures	points = $\frac{1}{2}$	
Map of Cowardin vegetation classes	2 structures	points = 2 points = 1	
	1 structure	points $= 1$ points $= 0$	
H 1.2. Hydroperiods (see p. 73)	1 50000000	Politic	Figure
Check the types of water regimes (hydroperiods) pr	resent within the wetland. T	The water	
regime has to cover more than 10% of the wetland o			2 types
descriptions of hydroperiods)			
Permanently flooded or inundated	4 or more types present	points $= 3$	
Seasonally flooded or inundated	3 types present	points $= 2$	
Occasionally flooded or inundated	2 types present	point = 1	
✓ Saturated only	1 type present	points $= 0$	1
Permanently flowing stream or river in, or adj			
Seasonally flowing stream in, or adjacent to,	the wetland		
Lake-fringe wetland = 2 points	Map of hydr	ron orio do	
Freshwater tidal wetland = 2 points	iviap of riyor	openous	
H 1.3. Richness of Plant Species (see p. 75)	10.62 (1)	20 1	5 -19 sp.
Count the number of plant species in the wetland that cover at least 10 ft ² . (different patches		О 10 ор.	
of the same species can be combined to meet the size	ze tnresnota)		1
You do not have to name the species. Do not include Eurasian Milfoil, reed canarygr	vass nurnla loosastrifa. Car	nadian Thistle	
If you counted:	> 19 species	points = 2	
List species below if you want to:	5 - 19 species	points = 2 $points = 1$	
zist species ceten y yeu nam to:	< 5 species	points $= 0$	
	1	1	
ALRU, POBA, GLEL, RUSP, RARE			

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	
None = 0 points $Low = 1$ point $Moderate = 2$ points	
	0
[riparian braided channels]	
High = 3 points	
NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	2
$\sqrt{}$ Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas	
that are permanently or seasonally inundated.(structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat	
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	5

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
	Figure
H 2.1 Buffers (see p. 80) Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. Points = 4 — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. Points = 4 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, .	Figure
 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. Points = 3 If buffer does not meet any of the criteria above No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. Points = 2 No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. Points = 2 Heavy grazing in buffer. Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 0 Buffer does not meet any of the criteria above. Points = 1 Aerial photo showing buffers 	
H 2.2 <u>Corridors and Connections</u> (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	No
roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above?	No
YES = 2 points (go to H 2.3) H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = 1 point NO = 0 points	Yes

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	None
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	0
long.	-
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	5
There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe	
wetland within $\frac{1}{2}$ mile points = 3 There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2 There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	7
TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	12

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact_WNHP/DNR) S/T/R information from Appendix D 🗸 or accessed from WNHP/DNR web site ____ NO 🗸 YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? 2. YES = Category INo ✓ Is not a bog for purpose of rating Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
 SC 5.0 Wetlands in Coastal Lagoons (see p. 91) Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon 	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
 — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 acre (4350 square feet) 	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	





0 30 60 240 120 180



Wetland Boarder --- Scrub/Shrub Veg.

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):1	1-1 Date of site visit: 3/21/13, 1/28/14
Rated by P Togher/L Danielski Train	ned by Ecology? Yes ✓ No Date of training 5/2005
SEC: <u>21</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u> Is S/T/	R in Appendix D? Yes No ✓
Map of wetland unit: Figure	11 Estimated size 2.6 ac
SUMMAR	Y OF RATING
Category based on FUNCTIONS provide	ded by wetland
I II III IV	
Cotogogy I. Coope 70	Score for Water Quality Functions 16
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 7
Category III = Score 30-50	Score for Habitat Functions 8
Category IV = Score < 30	TOTAL score for Functions 31
Category based on SPECIAL CHARAC	CTERISTICS of wetland
I II Does not Apply ✓	2 2 2 2 2 2 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3
Final Category (choose the	
, and the second	ation about the wetland unit
Wetland Unit has Special Characteristics	Wetland HGM Class used for Rating
Estuarine	Depressional ✓
Natural Heritage Wetland	Riverine
Bog	Lake-fringe
Mature Forest	Slope
Old Growth Forest	Flats
Coastal Lagoon	Freshwater Tidal

None of the above

Interdunal

Check if unit has multiple HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
 Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded ? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).
✓ NO - go to 5 YES – The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 $\boxed{\checkmark}$ YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)			
	improve water quality	per cox)			
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)			
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure			
1	Unit is a depression with no surface water leaving it (no outlet) points = 3				
D	Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points $= 2$	3			
	Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1				
	Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1				
	(If ditch is not permanently flowing treat unit as "intermittently flowing")				
	Provide photo or drawing				
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	0			
	definitions)				
D	YES points = 4				
	NO points = 0				
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure			
Ъ	Wetland has persistent, ungrazed, vegetation $>$ = 95% of area points = 5	5			
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$				
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$				
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$				
	Map of Cowardin vegetation classes	Eiguro			
	D1.4 Characteristics of seasonal ponding or inundation.	Figure			
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate	0			
	area as the average condition 5 out of 10 yrs.				
	Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4				
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2				
	Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0				
	Map of Hydroperiods				
D	Total for D 1 Add the points in the boxes above	8.00			
D	D 2. Does the wetland unit have the opportunity to improve water quality?	(see p. 44)			
D	Answer YES if you know or believe there are pollutants in groundwater or surface water	\ 1 /			
	coming into the wetland that would otherwise reduce water quality in streams, lakes or				
	groundwater downgradient from the wetland. Note which of the following conditions				
	provide the sources of pollutants. A unit may have pollutants coming from several				
	sources, but any single source would qualify as opportunity.				
	 — Grazing in the wetland or within 150 ft 				
	Untreated stormwater discharges to wetland				
	— Tilled fields or orchards within 150 ft of wetland				
	— A stream or culvert discharges into wetland that drains developed areas, residential areas,				
	farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland	multiplier			
	Wetland is fed by groundwater high in phosphorus or nitrogen	munipher			
	— Other	Yes			
	YES multiplier is 2 NO multiplier is 1	163			
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	40.00			
D	Add score to table on p. 1	16.00			
	Add score to table on p. 1				

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)	
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)	
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4	
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0	
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5 Total for D 3 Add the points in the boxes above	3	
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other		
	YES multiplier is 2 NO multiplier is 1	No	
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 **Add score to table on p. 1	7	

These questions apply to wetlands of all HC HABITAT FUNCTIONS - Indicators that unit func		nt habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to	provide habitat for mar	ny species?	
H 1.1 Vegetation structure (see p. 72)			
Check the types of vegetation classes present (as defin	ed by Cowardin)- Size thre	shold for each	2 Struc.
class is $\frac{1}{4}$ acre or more than 10% of the area if unit		v	Z Otruc.
Aquatic bed			1
Emergent plants			
Scrub/shrub (areas where shrubs have >309			
Forested (areas where trees have >30% cov	rer)		
If the unit has a forested class check if:			
The forested class has 3 out of 5 strata (car			
moss/ground-cover) that each cover 209		on	
Add the number of vegetation structures that qualify.		mainta 1	
	4 structures or more	points = 4	
Map of Cowardin vegetation classes	3 structures 2 structures	points = 2	
	1 structure	$ points = 1 \\ points = 0 $	
H 1.2. <u>Hydroperiods</u> (see p. 73)	1 structure	points = 0	Figure
Check the types of water regimes (hydroperiods) p	present within the wetland	The water	
regime has to cover more than 10% of the wetland			1 type
descriptions of hydroperiods)	or there to counting see tes	u joi	
Permanently flooded or inundated	4 or more types prese	ont points = 3	0
Seasonally flooded or inundated	3 types preser	_	
Occasionally flooded or inundated	2 types presen		
Saturated only	1 type presen	t $points = 0$	
Permanently flowing stream or river in, or a	djacent to, the wetland		
Seasonally flowing stream in, or adjacent to,	the wetland		
Lake-fringe wetland = 2 points			
Lake-fringe wetland = 2 pointsFreshwater tidal wetland = 2 points Map of hydroperiods			
H 1.3. Richness of Plant Species (see p. 75)			-F 05
Count the number of plant species in the wetland		lifferent patches	<5 sp.
of the same species can be combined to meet the s	ize threshold)		0
You do not have to name the species.			
Do not include Eurasian Milfoil, reed canaryg			
If you counted:	> 19 species	points $= 2$	
List species below if you want to:	5 - 19 species	points = 1	
alder, willows	< 5 species	points $= 0$	

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	2
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
 ✓ Standing snags (diameter at the bottom > 4 inches) in the wetland Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error. 	
H 1. TOTAL Score - potential for providing habitat	
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	3

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."	1
 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. Points = 4 — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. Points = 4 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, Points = 3 — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. Points = 3 	
If buffer does not meet any of the criteria above	
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. Points = 2 No paved areas or buildings within 50m of wetland for >50% circumference. 	
Light to moderate grazing, or lawns are OK. Points = 2	
Heavy grazing in buffer.Points = 1	
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Buffer does not meet any of the criteria above. Points = 1 Aerial photo showing buffers 	
H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	No
roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above?	No
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
H 2.2.3 Is the wetland: ✓ within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres?	Yes
YES = 1 point NO = 0 points	

II 2 2 November 21 and the other mining to be being the 1 bit of 1 and 1	I
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	NI
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	None
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest. Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	0
If wetland has 3 or more priority habitats = 4 points	
* '	
If wetland has 2 priority habitats = 3 points If wetland has 1 priority habitats = 1 point No habitats = 0 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that	3	
best fits) (see p. 84)		
There are at least 3 other wetlands within ½ mile, and the connections between them are		
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some		
boating, but connections should NOT be bisected by paved roads, fill, fields, or other		
development. points = 5		
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe		
wetlands within ½ mile points = 5		
✓ There are at least 3 other wetlands within ½ mile, BUT the connections between them are		
· ·		
F		
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe		
wetland within $\frac{1}{2}$ mile points = 3		
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2		
There are no wetlands within $\frac{1}{2}$ mile. points = 0		
H 2. TOTAL Score - opportunity for providing habitat	5	
Add the scores from H2.1,H2.2, H2.3, H2.4	lo l	
TOTAL for H 1 from page 14	2	
	3	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	T	
	8	
p. 1		

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

Cat. I

No \(\sqrt{ Is not a bog for purpose of rating} \)

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
 Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO ✓ not a forested wetland with special characteristics 	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of 	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 acre (4350 square feet)	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	



Figure 11-1. Wetland 11-1





Summary of basic information about the wetland unit			
Wetland Unit has Special		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine		Depressional	\
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	/	Check if unit has multiple	
	V	HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance. City of Kent	✓	

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
3. Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? V NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES – The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. <i>This means that any outlet, if present, is higher than the interior of the wetland.</i>
NO – go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet. ✓ NO – go to 8 — YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure	
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing		
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	0	
	definitions)	0	
D	YES points = 4		
	NO points = 0		
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure	
D	Wetland has persistent, ungrazed, vegetation $> 95\%$ of area points $= 5$	5	
ט	Wetland has persistent, ungrazed, vegetation $> 1/2$ of area points = 3		
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$ Wetland has persistent, ungrazed vegetation $< 1/10$ of area points $= 0$		
	Map of Cowardin vegetation classes		
	D1.4 Characteristics of seasonal ponding or inundation.	Figure	
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 0 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods	4	
D		10.00	
	D 2 Does the wetland unit have the apportunity to improve water quality?	(see p. 44)	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen		
	— Other	Yes	
	YES multiplier is 2 NO multiplier is 1		
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	20.00	

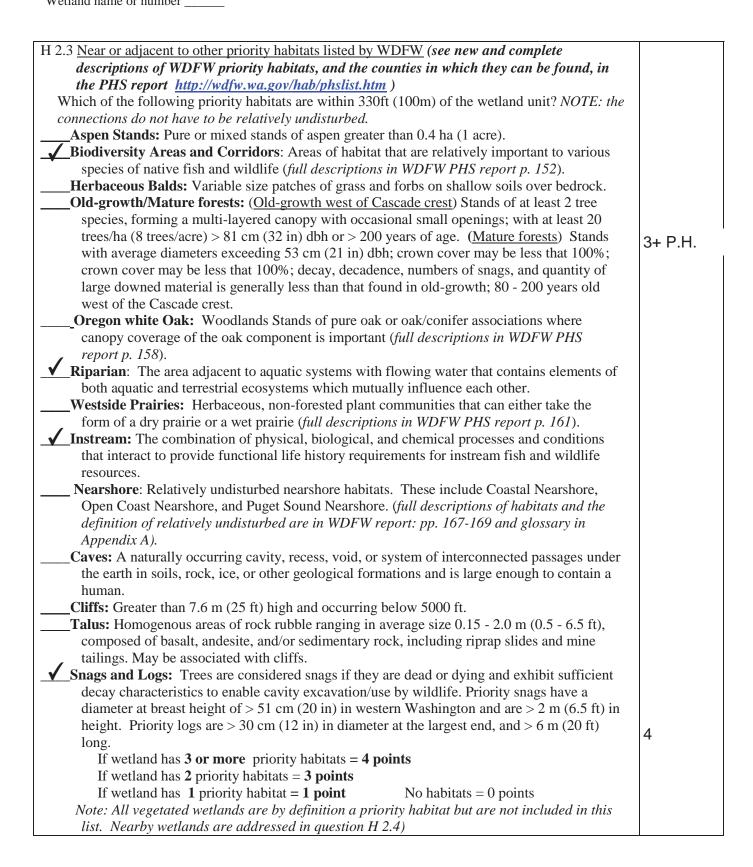
D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)
	reduce flooding and stream degradation D 3. Does the wetland unit have the potential to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	0
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5	5
D	Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0 D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland	5
	to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire unit is in the FLATS class The area of the unit points = 0 points = 5	
D		10 (see p. 49)
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise	
	flow into a river or stream that has flooding problems — Other YES multiplier is 2 NO multiplier is 1	multiplier No
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	10

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			Points (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?			
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined	l by Cowardin)- Size thresh	old for each	3 Struc.
class is $\frac{1}{4}$ acre or more than 10% of the area if unit is	s smaller than 2.5 acres.		
Aquatic bed			2
Emergent plants			
Scrub/shrub (areas where shrubs have >30%	*		
Forested (areas where trees have >30% cover	·)		
If the unit has a forested class check if:	h	1	
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20%			
Add the number of vegetation structures that qualify. If	4 structures or more	points = 4	
	3 structures	points = $\frac{4}{2}$	
Map of Cowardin vegetation classes	2 structures	points = 2 $points = 1$	
	1 structure	points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73)		P	Figure
Check the types of water regimes (hydroperiods) pro	esent within the wetland. T	he water	
regime has to cover more than 10% of the wetland or			3 types
descriptions of hydroperiods)	,		
Permanently flooded or inundated	4 or more types present	points = 3	2
Seasonally flooded or inundated	3 types present	points $= 2$	
Occasionally flooded or inundated	2 types present	point = 1	
Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or adj			
Seasonally flowing stream in, or adjacent to, the	ne wetland		
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hydro	pperiods	
H 1.3. Richness of Plant Species (see p. 75)	. 2		>19 sp.
Count the number of plant species in the wetland that		erent patches	/19 sp.
of the same species can be combined to meet the size threshold)			2
You do not have to name the species.	1 1	1. m	
Do not include Eurasian Milfoil, reed canarygro			
If you counted:	> 19 species	points = 2	
List species below if you want to:	5 - 19 species < 5 species	points = 1 $points = 0$	
	< 3 species	points – 0	

H 1.4. Interspersion of habitats (see p. 76)	Figure	
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	High	
mudflats) is high, medium, low, or none.	3	
None = 0 points $Low = 1$ point $Moderate = 2$ points		
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes		
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the		
number of points you put into the next column.	5	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).		
 ✓ Standing snags (diameter at the bottom > 4 inches) in the wetland ✓ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) ✓ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) ✓ Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error. 		
H 1. TOTAL Score - potential for providing habitat	14	
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	l' ⁻	

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 Buffers (see p. 80)	Figure	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."	1	
 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use)		
If buffer does not meet any of the criteria above		
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. Points = 2 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points = 2		
Heavy grazing in buffer.Points = 1		
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Buffer does not meet any of the criteria above. Points = 1 Aerial photo showing buffers 		
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	No	
roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above?	No	
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$		
H 2.2.3 Is the wetland: ✓ within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres?	Yes	
YES = 1 point NO = 0 points		

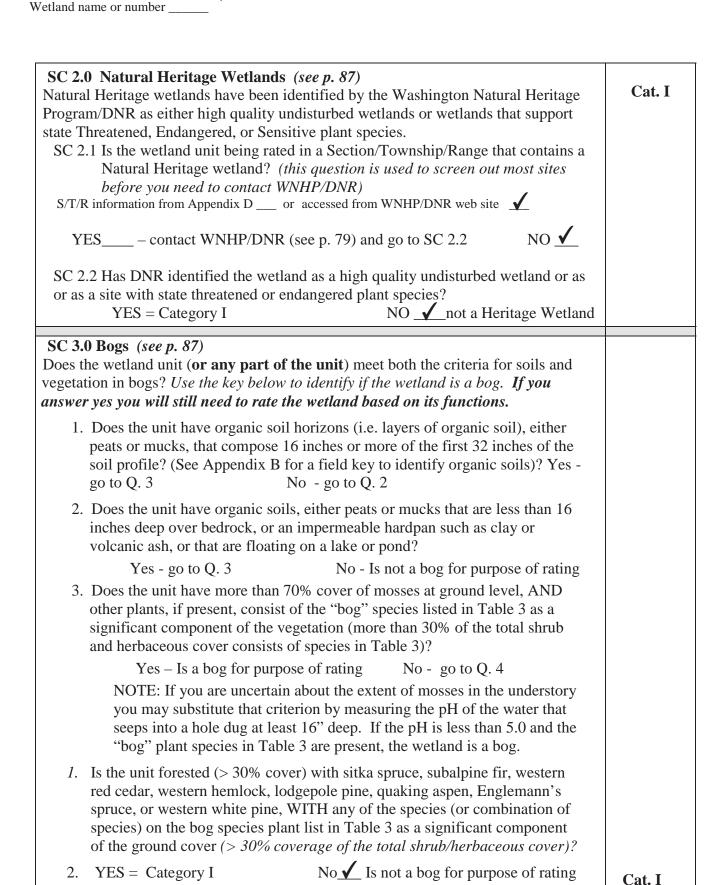


H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that	3	
best fits) (see p. 84)		
There are at least 3 other wetlands within ½ mile, and the connections between them are		
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some		
boating, but connections should NOT be bisected by paved roads, fill, fields, or other		
development. points = 5		
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe		
wetlands within $\frac{1}{2}$ mile points = 5		
There are at least 3 other wetlands within ½ mile, BUT the connections between them are		
disturbed points = 3		
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe		
wetland within $\frac{1}{2}$ mile points = 3		
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2		
There are no wetlands within $\frac{1}{2}$ mile. points = 0		
H 2. TOTAL Score - opportunity for providing habitat	9	
Add the scores from H2.1,H2.2, H2.3, H2.4	19	
TOTAL for H 1 from page 14	14	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	23	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	



SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

— Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO **✓** not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO ✓ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

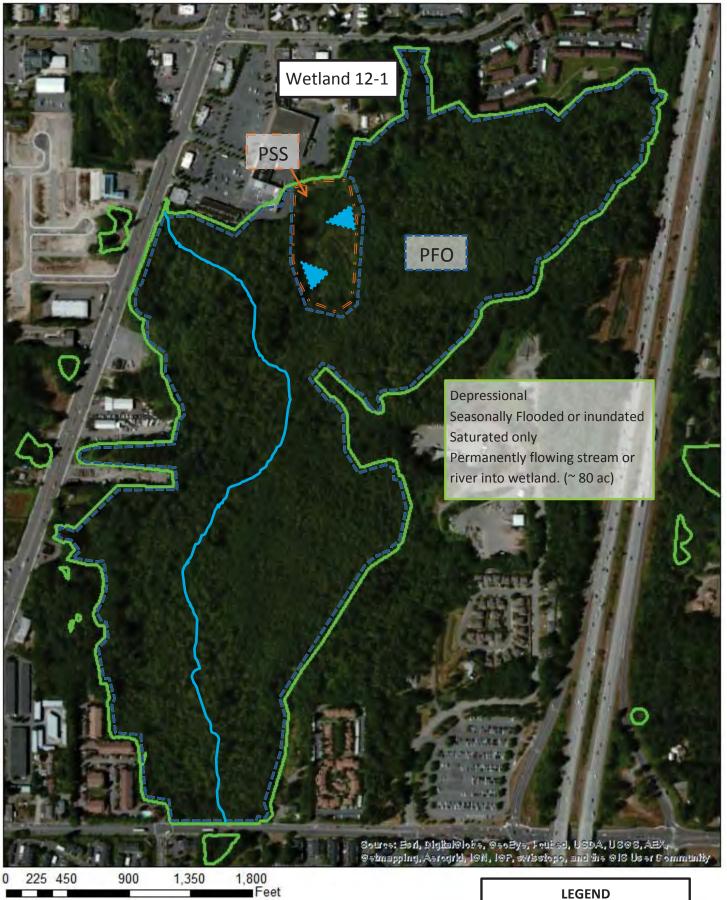
— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	13//
If you answered NO for all types enter "Not Applicable" on p.1	





LEGEND

Wetland Boundary Forested Vegetation Scrub/Shrub Vegetation Flowing stream or river

Seasonally flooded

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):12	2-2 Date of site visit: 3/21/13, 3/25/14	
Rated by P Togher/ L Danielski Train	ned by Ecology? Yes ✓ No Date of training 5/2005	
SEC: <u>28</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u> Is S/T/	R in Appendix D? Yes No ✓	
Map of wetland unit: Figure	Estimated size 0.5 ac	
SUMMAR	Y OF RATING	
Category based on FUNCTIONS provide	led by wetland	
I II III✓ IV		
Cotogory I. Coores 70	Score for Water Quality Functions 14	
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 5	
Category III = Score 30-50 Score for Habitat Functions 15		
Category IV = Score < 30	13	
	TOTAL score for Functions 34	
Category based on SPECIAL CHARAC I II Does not Apply_ Final Category (choose the		
· ·	ation about the wetland unit	
Wetland Unit has Special Characteristics	Wetland HGM Class	
Estuarine	used for Rating Depressional ✓	
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? ✓ NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
interior of the wetland.
NO – go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing		
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area Wetland has persistent, ungrazed, vegetation > = 1/2 of area Wetland has persistent, ungrazed vegetation > = 1/10 of area Wetland has persistent, ungrazed vegetation < 1/10 of area Points = 1 Wetland has persistent, ungrazed vegetation < 1/10 of area Points = 0	Figure	
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0		
D	Total for D 1 Add the points in the boxes above	7.00	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen Other YES multiplier is 2 NO multiplier is 1		
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	14.00	

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)	
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?		
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2	
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0	
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3	
D	Total for D 3 Add the points in the boxes above	5	
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. **Note which of the following indicators of opportunity apply**. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other YES multiplier is 2 NO multiplier is 1	(see p. 49) McSorely Creek has no documentation of flooding problems multiplier No	
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	5	

These questions apply to wetlands of all H HABITAT FUNCTIONS - Indicators that unit fur		t habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential t	o provide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as de		hold for each	2 Struc.
class is ¼ acre or more than 10% of the area if uAquatic bed	nit is smaller than 2.5 acres.		1
Aquatic bed Emergent plants			'
Scrub/shrub (areas where shrubs have >3	30% cover)		
Forested (areas where trees have >30% c			
If the unit has a forested class check if:			
The forested class has 3 out of 5 strata (o			
moss/ground-cover) that each cover 2		on	
Add the number of vegetation structures that qualify		mainte 4	
	4 structures or more 3 structures	points = 4 $points = 2$	
Map of Cowardin vegetation classes	2 structures	points = 2 $points = 1$	
	1 structure	points = 1 $points = 0$	
H 1.2. Hydroperiods (see p. 73)	1 Strattare	points o	Figure
Check the types of water regimes (hydroperiods	s) present within the wetland.	The water	
regime has to cover more than 10% of the wetlan			2 types
descriptions of hydroperiods)			1
Permanently flooded or inundated	4 or more types presen	_	'
Seasonally flooded or inundated	3 types present		
Occasionally flooded or inundatedSaturated only	2 types present 1 type present	point = 1 $points = 0$	
Permanently flowing stream or river in, or	• • •	points = 0	
Seasonally flowing stream in, or adjacent	•		
Lake-fringe wetland = 2 points	,		
Freshwater tidal wetland = 2 points	Map of hyd	roperiods	
H 1.3. Richness of Plant Species (see p. 75)			
Count the number of plant species in the wetlan	d that cover at least 10 ft ² . (di	fferent patches	5 -19 sp.
of the same species can be combined to meet the	e size threshold)		1
You do not have to name the species.			'
Do not include Eurasian Milfoil, reed canar			
If you counted:	> 19 species	points $= 2$	
List species below if you want to:	5 - 19 species	points = 1 $points = 0$	
	< 5 species	points – 0	

Total for page 3

H 1.4. Interspersion of habitats (see p. 76)	Figure	
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	Low	
mudflats) is high, medium, low, or none.		
	1	
None = 0 points Low = 1 point Moderate = 2 points		
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes		
H 1.5. Special Habitat Features: (see p. 77)		
Check the habitat features that are present in the wetland. The number of checks is the	3	
number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).		
$\sqrt{}$ Standing snags (diameter at the bottom > 4 inches) in the wetland		
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)		
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)		
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas		
that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants		
NOTE: The 20% stated in early printings of the manual on page 78 is an error.		
H 1. TOTAL Score - potential for providing habitat	┢╼╼╼╼┪ ╏╴	
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	<u>i</u> /	

Comments

H 2. Does the wetland unit have the opportunity to pro	vide habitat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of buffer	of wetland unit. The highest scoring	1
criterion that applies to the wetland is to be used in the rating.		'
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas	, rocky areas, or open water >95%	
of circumference. No structures are within the undistu		
undisturbed also means no-grazing, no landscaping, no	daily human use) $Points = 5$	
— 100 m (330 ft) of relatively undisturbed vegetated areas		
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas,	rocky areas, or open water >95%	
circumference.	Points = 4	
 — 100 m (330ft) of relatively undisturbed vegetated areas 	, rocky areas, or open water > 25%	
circumference, .	Points = 3	
 50 m (170ft) of relatively undisturbed vegetated areas, 	rocky areas, or open water for >	
50% circumference.	Points = 3	
If buffer does not meet any of the o	riteria above	
 No paved areas (except paved trails) or buildings within 	n 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are	Points = 2	
 No paved areas or buildings within 50m of wetland for 	>50% circumference.	
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 9	5% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland		
Buffer does not meet any of the criteria above.	Points = 1	
	to showing buffers	
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and	l unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has	at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, o		
uplands that are at least 250 acres in size? (dams in ripar		No
roads, paved roads, are considered breaks in the corrido		
YES = 4 points (go to H 2.3)	NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturbed and		
(either riparian or upland) that is at least 50ft wide, has at		
forest, and connects to estuaries, other wetlands or undist		No
acres in size? OR a Lake-fringe wetland, if it does not h	have an undisturbed corridor as in	
the question above?	NO 11222	
YES = 2 points (go to H 2.3)	NO = H 2.2.3	
H 2.2.3 Is the wetland:	ow. OD	Yes
within 5 mi (8km) of a brackish or salt water estuary OR		103
within 3 mi of a large field or pasture (>40 acres) within 1 mi of a lake greater than 20 acres?	UK	
YES = 1 point	NO = 0 points	
1 Lo – 1 ponit	110 – v points	

Total for page 2

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) $>$ 81 cm (32 in) dbh or $>$ 200 years of age. (Mature forests) Stands	2 P.H.
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	2 1 .11.
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
▼ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
✓ Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	3
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	3	
There are at least 3 other wetlands within ½ mile, and the connections between them are		
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some		
boating, but connections should NOT be bisected by paved roads, fill, fields, or other		
development. points = 5		
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe		
wetlands within $\frac{1}{2}$ mile points = 5		
There are at least 3 other wetlands within ½ mile, BUT the connections between them are		
disturbed points = 3		
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe		
wetland within $\frac{1}{2}$ mile points = 3		
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2		
There are no wetlands within $\frac{1}{2}$ mile. points = 0		
	<u> </u>	
H 2 . TOTAL Score - opportunity for providing habitat	8	
Add the scores from H2.1,H2.2, H2.3, H2.4		
TOTAL for H 1 from page 14	7	
	<u></u>	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on		
p. 1	15	
P' -		

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. The workend has at least 2 of the following features: tidal channels.	
— The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87)

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

Cat. I

SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR)

S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ - contact WNHP/DNR (see p. 79) and go to SC 2.2

NO <u></u>✓

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO **✓** not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3

 No go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3

No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

 $Yes-Is \ a \ bog \ for \ purpose \ of \ rating$

No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested	Wetlands	(see n	90)
SC T.V I VI CSICU	vi Cuanus	(see p.	701

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

— Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO **✓** not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO ✓ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

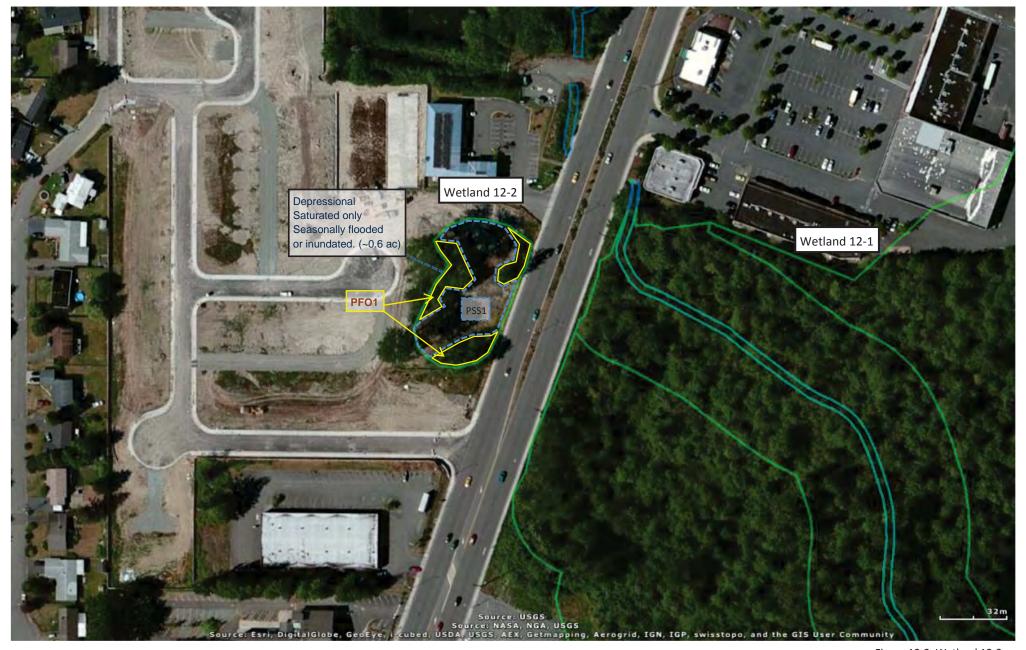


Figure 12-2. Wetland 12-2





WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	12-3	Date	of site visi	±: 3/21/13
Rated by P Togher	Trained b	y Ecology? Yes <u>√</u> No	Date o	f training 5/200
SEC: <u>28</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u>	Is S/T/R in .	Appendix D? Yes	No <u></u> ✓	
Map of wetland unit:	Figure 12	Estimated size	0.2 ac	
SUM	MARY O	F RATING		
Category based on FUNCTIONS	provided l	oy wetland		
I II III IV.✓	_	•		
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30	Sc	of for Water Quality Fu ore for Hydrologic Fu Score for Habitat Fu FOTAL score for Fu	nctions 7	16 7 5 28
Category based on SPECIAL CH I II Does not Appl Final Category (cho	ly_✓			IV
Summary of basic	information	about the wetland u		-
Wetland Unit has Special Characteristics		Wetland HGM C used for Ratin		

Summary of pasic information about the wettand unit			
Wetland Unit has Special		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine		Depressional	\
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	/	Check if unit has multiple	
	V	HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ▼NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? ✓ NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
NO - go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1	Figure
D	(If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES Points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$ Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$ Wetland has persistent, ungrazed vegetation $< 1/10$ of area points $= 0$ Map of Cowardin vegetation classes	Figure
D	D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0	Figure
D	Total for D 1 Map of Hydroperiods Add the points in the boxes above	8.00
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland	(see p. 44)
	 Wetland is fed by groundwater high in phosphorus or nitrogen Other YES multiplier is 2 NO multiplier is 1 	Yes
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	16.00

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5 Total for D 3 Add the points in the boxes above	3
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other	
	YES multiplier is 2 NO multiplier is 1	No
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 **Add score to table on p. 1	7

These questions apply to wetlands of all HGM	M classes.		Points
HABITAT FUNCTIONS - Indicators that unit function	ons to provide important	habitat	(only 1 score per box)
H 1. Does the wetland unit have the potential to pr	ovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined		old for each	1 Struc.
class is $\frac{1}{4}$ acre or more than 10% of the area if unit is	s smaller than 2.5 acres.		
Aquatic bed			0
Emergent plants			
Scrub/shrub (areas where shrubs have >30%			
Forested (areas where trees have >30% cover If the unit has a forested class check if:	")		
The forested class has 3 out of 5 strata (cano	ny sub canony shrubs har	hacaous	
moss/ground-cover) that each cover 20%			
Add the number of vegetation structures that qualify. If	1		
That the number of vegetation structures that qualify. If	4 structures or more	points $= 4$	
Man of Cowardin vagatation alacase	3 structures	points $= 2$	
Map of Cowardin vegetation classes	2 structures	points = 1	
	1 structure	points $= 0$	
H 1.2. Hydroperiods (see p. 73)		*	Figure
Check the types of water regimes (hydroperiods) pro	esent within the wetland. The	he water	1 type
regime has to cover more than 10% of the wetland or	¹ / ₄ acre to count. (see text f	or	i type
descriptions of hydroperiods)			0
Permanently flooded or inundated	4 or more types present	points = 3	U
Seasonally flooded or inundated	3 types present	points = 2	
✓ Occasionally flooded or inundated	2 types present	point = 1	
Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or adja			
Seasonally flowing stream in, or adjacent to, the	ne wetland		
Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	Map of hydro	poriodo	
	Map of flydro	pperious	
H 1.3. Richness of Plant Species (see p. 75)	10.62 (100	1	<5 sp.
Count the number of plant species in the wetland the		erent patches	το ορ.
of the same species can be combined to meet the size You do not have to name the species.	e inresnoia)		0
Do not include Eurasian Milfoil, reed canarygra	uss nurnla loosastrifa. Can	adian Thistle	
If you counted:		points $= 2$	
List species below if you want to:		points $= 2$ points $= 1$	
List species below if you want to.		points = 0	
Alder	ve species	Politic	
			1

Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) 	
Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	0

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	1
criterion that applies to the wetland is to be used in the rating. See text for definition of	1
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer, (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
 No paved areas or buildings within 50m of wetland for >50% circumference. 	
Light to moderate grazing, or lawns are OK. Points = 2	
— Heavy grazing in buffer. Points = 1	
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 0. 	
fields, paving, basalt bedrock extend to edge of wetland Points = 0. Buffer does not meet any of the criteria above. Points = 1	
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor).	No
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	140
the question above?	
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	Yes
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres?	
YES = 1 point NO = 0 points	

Total for page 2

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	None
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	0
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	3
There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.	
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are	
disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile points = 2	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2 There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	5
TOTAL for H 1 from page 14	0
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt.	
$YES = Go to SC 1.1 \qquad NO \checkmark$	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87)

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

Cat. I

SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR)

S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____

YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2

NO ✓

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO ✓ not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3

No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Is a bog for purpose of rating

No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

— Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO **✓** not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO ✓ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

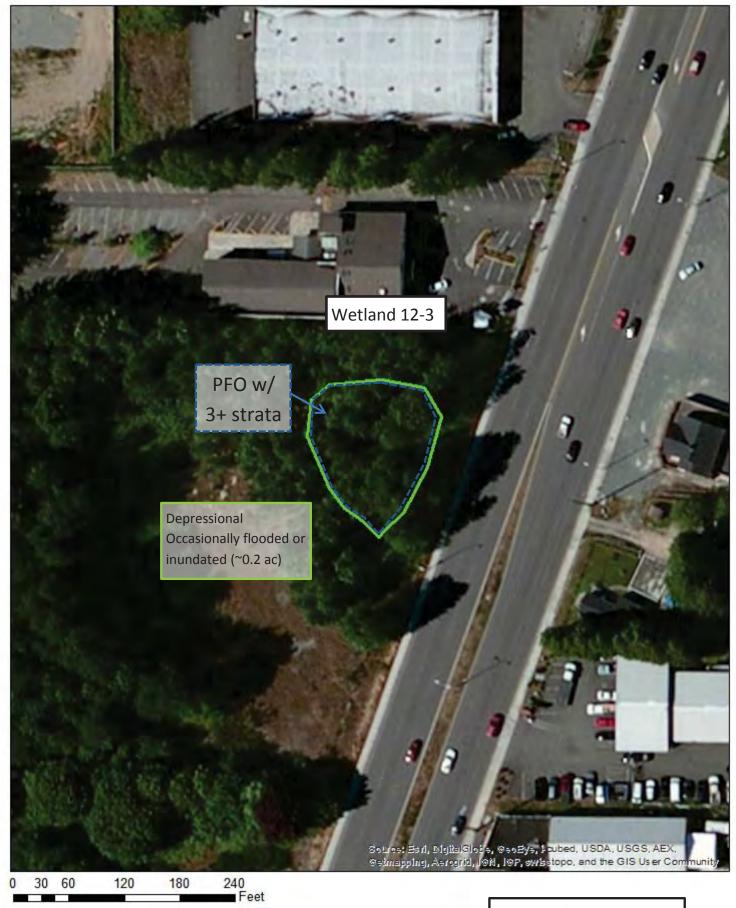
— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
Ocean Shores-Copalis- lands west of SR 115 and SR 109	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	I N/ A
If you answered NO for all types enter "Not Applicable" on p.1	





LEGEND

Wetland BoundryForested Vegetation

RATING SUMMARY – Western Washington

Name of wetland (or ID #): <u>12-4</u>			Date of	site visit: N/A_
Rated by L. Daniels	ki/M.Dalzell	Traine	ed by Ecology?	✓YesNo	o Date of training 06/14
HGM Class used fo	r rating Depres	ssional	Wetland has m	ultiple HGM	I classes? Y V N
	is not complete f base aerial pho			ed (figures c	can be combined).
VERALL WETLA	ND CATEGO	ORY <u>III</u> (ba	sed on function	ns 🔽 or spe	ecial characteristics
1. Category of v	wetland based	d on FUNCTIO	ONS		
	Category I – Tot	al score = 23 - 2	27		Score for each
	Category II – To	tal score = 20 -	22		function based
✓	Category III – To	otal score = 16	- 19		on three ratings
	Category IV – To	otal score = 9 - 1	15		(order of ratings is not
FUNCTION	Improving	Hydrologic	Habitat		important)
	Water Quality				9 = H,H,H
			propriate ratings		8 = H,H,M
Site Potential	H M ✓ L	H ✓ M LL	H		7 = H,H,L
Landscape Potential	H ☐ M ✓ L ☐	H √ M□L□	H□ M□ L√		7 = H,M,M
Value	H M V L	H M L	H□ M√ L□	TOTAL	6 = H,M,L
Score Based on	6	7	1	17	6 = M,M,M 5 = H,L,L
Ratings	6	/	4	17	5 = M,M,L
					4 = M,L,L
					3 = L,L,L
2 Cotosomilhos	ad an CDECIA	LCHADACTE	DICTICS of	الم مرما	, ,

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I 🗌
Old Growth Forest	I
Coastal Lagoon	I I II
Interdunal	I _II _ III _ IV
None of the above	*

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	12-4-1
Hydroperiods	D 1.4, H 1.2	12-4-1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	12-4-1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	12-4-2
Map of the contributing basin	D 4.3, D 5.3	12-4-3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	12-4-4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	12-4-5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	12-4-6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1.	Are the water levels in the entire unit usually controlled by tides except during floods?
	✓ NO – go to 2
-	1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
	NO – Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.
2.	The entire wetland unit is flat and precipitation is the only source ($>90\%$) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
	✓ NO – go to 3
3.	Does the entire wetland unit meet all of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size; _At least 30% of the open water area is deeper than 6.6 ft (2 m).
	✓ NO – go to 4 YES – The wetland class is Lake Fringe (Lacustrine Fringe)
4.	Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, The water leaves the wetland without being impounded .
	✓ NO – go to 5
	NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).
5.	Does the entire wetland unit meet all of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river, The overbank flooding occurs at least once every 2 years.

We	tland name or number	
	✓ NO – go to 6	
6.	Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interof the wetland.	rior
	NO – go to 7 YES – The wetland class is Depressional	
7.	Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natu outlet.	ıral
	■ NO – go to 8 ■ YES – The wetland class is Depressional	

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. <u>Characteristics of surface water outflows from the wetland</u> :		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).		
points = 3		
✓ Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 🗸 No =	0 0	
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):		
✓ Wetland has persistent, ungrazed, plants > 95% of area points = 5		
Wetland has persistent, ungrazed, plants > ½ of area points = 3	5	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1		
Wetland has persistent, ungrazed plants $<^1/_{10}$ of area points = 0		
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > ½ total area of wetland points = 4	4	
Area seasonally ponded is > ¼ total area of wetland points = 2		
Area seasonally ponded is < ¼ total area of wetland points = 0		
Total for D 1 Add the points in the boxes above	11	
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first p	page	
D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No =	0 1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No =	0 1	
D 2.3. Are there septic systems within 250 ft of the wetland?	0 0	
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	0	
Source Yes = 1 ✓ No =	0 0	
Total for D 2 Add the points in the boxes above	2	
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the	first page	
D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the		
303(d) list? Yes = 1 ✓ No =	0 0	
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No =	0 1	
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2 No =	0 0	
Total for D 3 Add the points in the boxes above	1	
Rating of Value If score is: $2-4 = H$ $1 = M$ $0 = L$ Record the rating on the first page		
D1.1 - A 12-inch concrete culvert is located under 272nd Street - Rased on its location in a lowest snot surface water		

D1.1 - A 12-inch concrete culvert is located under 272nd Street. Based on its location in a lowest spot, surface water likely outflows into the culvert and flows north.

D2.1 - Wetland 12-4 is located immediately adjacent to 272nd Street

D3.2 - Wetland 12-4 is located in the McSorley Creek basin, and McSorley Creek is on the 303(d) list

DEPRESSIONAL AND FLATS WETLANDS				
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation				
D 4.0. Does the site have the potential to reduce flooding and erosion?				
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2			
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	3			
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. ☐ The area of the basin is less than 10 times the area of the unit ☐ The area of the basin is 10 to 100 times the area of the unit ☐ The area of the basin is more than 100 times the area of the unit ☐ Entire wetland is in the Flats class ☐ The area of the basin is more than 100 times the area of the unit ☐ Entire wetland is in the Flats class	3			
Total for D 4 Add the points in the boxes above	8			
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the	first page			
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?				
D 5.1. Does the wetland receive stormwater discharges? $Ves = 1$ No = 0	1			
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1			
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1			
Total for D 5 Add the points in the boxes above	3			
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the	first page			
D 6.0. Are the hydrologic functions provided by the site valuable to society?				
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ■ Surface flooding problems are in a sub-basin farther down-gradient. points = 1 The existing or potential outflow from the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 There are no problems with flooding downstream of the wetland. points = 0	0			
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 V No = 0	0			
Total for D 6 Add the points in the boxes above	0			
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the	first page			

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS			
Water Quality Functions - Indicators that the site functions to improve water quality			
R 1.0. Does the site have the potential to improve water quality?			
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:			
\square Depressions cover $>^3/_4$ area of wetland points = 8			
Depressions cover > ½ area of wetland points = 4	0		
Depressions present but cover < ½ area of wetland points = 2			
No depressions present points = 0			
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, not Cowardin classes)			
Trees or shrubs $> \frac{2}{3}$ area of the wetland points = 8			
Trees or shrubs $> \frac{1}{3}$ area of the wetland points = 6	0		
Herbaceous plants (> 6 in high) > $\frac{2}{3}$ area of the wetland points = 6			
Herbaceous plants (> 6 in high) > $^{1}/_{3}$ area of the wetland points = 3			
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland points = 0			
Total for R 1 Add the points in the boxes above	0		
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on a	he first page		
R 2.0. Does the landscape have the potential to support the water quality function of the site?			
R 2.1. Is the wetland within an incorporated city or within its UGA? $\qquad \qquad \qquad$	0		
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	0		
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years? Yes = 1 No = 0	0		
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	0		
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources Yes = 1 No = 0	0		
Total for R 2 Add the points in the boxes above	0		
Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L Record the rating on a	he first page		
R 3.0. Is the water quality improvement provided by the site valuable to society?			
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	_		
Yes = 1 No = 0	0		
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	0		
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found) [Yes = 2 No = 0	0		
Total for R 3 Add the points in the boxes above	0		
Rating of Value If score is 2-4 = H 1 = M 0 = L Record the rating on a	he first page		

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS			
Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion			
R 4.0. Does the site have the potential to reduce flooding and erosion?			
R 4.1. Characteristics of the overbank storage the wetland provides:	0		
Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the			
stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average			
width of stream between banks).			
If the ratio is more than 20 points = 9			
If the ratio is 10-20 points = 6			
If the ratio is 5-<10 points = 4			
If the ratio is 1-<5 points = 2			
If the ratio is < 1 points = 1			
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat large woody debris as forest or	0		
shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person			
height. These are <u>NOT Cowardin</u> classes).			
Forest or shrub for $> \frac{1}{3}$ area OR emergent plants $> \frac{2}{3}$ area points = 7			
Forest or shrub for $> \frac{1}{10}$ area OR emergent plants $> \frac{1}{3}$ area points = 4			
☐ Plants do not meet above criteria points = 0			
Total for R 4 Add the points in the boxes above	0		
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the	he first page		
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?			
R 5.1. Is the stream or river adjacent to the wetland downcut? Yes = 0 No = 1	0		
R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1 No = 0	0		
R 5.3. Is the up-gradient stream or river controlled by dams? Yes = 0 No = 1	0		
Total for R 5 Add the points in the boxes above	0		
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the	he first page		
R 6.0. Are the hydrologic functions provided by the site valuable to society?			
R 6.1. Distance to the nearest areas downstream that have flooding problems?	0		
Choose the description that best fits the site.	U		
The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to			
human or natural resources (e.g., houses or salmon redds) points = 2			
Surface flooding problems are in a sub-basin farther down-gradient points = 1			
No flooding problems anywhere downstream points = 0			
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0		
Total for R 6 Add the points in the boxes above	0		
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the	he first page		

LAKE FRINGE WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality			
L 1.0. Does the site have the potential to improve water quality?			
L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes): Plants are more than 33 ft (10 m) wide Plants are more than 16 ft (5 m) wide and <33 ft Plants are more than 6 ft (2 m) wide and <16 ft Plants are less than 6 ft wide Plants are less than 6 ft wide	0		
L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >²/₃ of the vegetated area points = 4 Cover of herbaceous plants is >¹/₃ of the vegetated area points = 3 Other plants that are not aquatic bed > ²/₃ unit points = 3 Other plants that are not aquatic bed in > ¹/₃ vegetated area points = 1 Aquatic bed plants and open water cover > ²/₃ of the unit	0		
Total for L 1 Add the points in the boxes above	0		
Rating of Site Potential If score is:8-12 = H4-7 = M0-3 = L Record the rating on the score is:8-12 = H4-7 = M0-3 = L	he first page		
L 2.0. Does the landscape have the potential to support the water quality function of the site?			
L 2.1. Is the lake used by power boats?	0		
L 2.2. Is > 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants? Yes = 1 No = 0	0		
L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil? Yes = 1 No = 0	0		
Total for L 2 Add the points in the boxes above	0		
Rating of Landscape Potential: If score is: 2 or 3 = H 1 = M 0 = L Record the rating on the first page			
L 3.0. Is the water quality improvement provided by the site valuable to society?			
L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?	0		
L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)? Yes = 1 No = 0	0		
L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the lake or basin in which the unit is found. \Box Yes = 2 \Box No = 0	0		
Total for L 3 Add the points in the boxes above	0		
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the	he first page		

LAKE FRINGE WETLANDS		
Hydrologic Functions - Indicators that the wetland unit functions to re	duce shoreline erosi	on
L 4.0. Does the site have the potential to reduce shoreline erosion?		
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not i	include Aquatic bed):	0
Choose the highest scoring description that matches conditions in the wetland.		U
\square > $\frac{3}{4}$ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6	
> 3⁄4 of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4	
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4	
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2	
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0	
Rating of Site Potential: If score is:6 = M0-5 = L	Record the rating on t	he first page
	-:	
L 5.0. Does the landscape have the potential to support the hydrologic functions of the	e site?	
L 5.1. Is the lake used by power boats with more than 10 hp?	Yes = 1 No = 0	0
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	☐ Yes = 1 ☐ No = 0	0
Total for L 5 Add the point	s in the boxes above	0
Rating of Landscape Potential If score is: 2 = H 1 = M 0 = L	Record the rating on t	he first page
L 6.0. Are the hydrologic functions provided by the site valuable to society?		
L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one re	esource is present,	0
choose the one with the highest score.		O
There are human structures or old growth/mature forests within 25 ft of OHWM of the sl	hore in the unit	
	points = 2	
There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1	
Other resources that could be impacted by erosion	points = 1	
There are no resources that can be impacted by erosion along the shores of the unit	points = 0	
Rating of Value: If score is: 2 = H 1 = M 0 = L	Record the rating on a	the first page

NOTES and FIELD OBSERVATIONS:

SLOPE WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality			
S 1.0. Does the site have the potential to improve water quality?			
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	0		
Slope is 1% or less points = 3			
Slope is > 1%-2% points = 2			
Slope is > 2%-5% points = 1			
Slope is greater than 5% points = 0			
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0		
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	0		
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.			
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6			
Dense, uncut, herbaceous plants > ½ of area points = 3			
Dense, woody, plants > ½ of area points = 2			
Dense, uncut, herbaceous plants > ¼ of area points = 1			
Does not meet any of the criteria above for plants points = 0			
Total for S 1 Add the points in the boxes above	0		
Rating of Site Potential If score is: 12 = H 6-11 = M 0-5 = L Record the rating on	the first page		
S 2.0. Does the landscape have the potential to support the water quality function of the site?			
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0		
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	0		
Other sources Yes = 1 No = 0	U		
Total for S 2 Add the points in the boxes above	0		
Rating of Landscape Potential If score is:1-2 = M			
S 3.0. Is the water quality improvement provided by the site valuable to society?			
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	0		
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list. \square Yes = 1 \square No = 0	0		
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES</i> if there is a TMDL for the basin in which unit is found.	0		
Total for S 3 Add the points in the boxes above	0		
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on	the first page		

SLOPE WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion			
S 4.0. Does the site have the potential to reduce flooding and stream erosion?			
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions points = 0	0		
Rating of Site Potential If score is: 1 = M 0 = L Record the rating on	the first page		
S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?			
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	0		
Rating of Landscape Potential If score is: 1 = M 0 = L Record the rating on the first page			
S 6.0. Are the hydrologic functions provided by the site valuable to society?			
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream points = 0	0		
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0		
Total for S 6 Add the points in the boxes above	0		
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page			

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed Emergent Scrub-shrub (areas where shrubs have > 30% cover) Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	2
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated Very Seasonally flooded or inundated Occasionally flooded or inundated Saturated only Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland Freshwater tidal wetland 2 points	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species 5 - 19 species	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Low = 1 point Moderate = 2 points All three diagrams in this row are HIGH = 3points	1

H 1.5. Special habitat features:	1
Check the habitat features that are present in the wetland. The number of checks is the number of points.	ļ '
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	
strata)	
Total for H 1 Add the points in the boxes above	5
Rating of Site Potential If score is:15-18 = H7-14 = M0-6 = L	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).	T
Calculate: % undisturbed habitat $\frac{0.00}{1}$ + [(% moderate and low intensity land uses)/2] $\frac{0.00}{1}$ = $\frac{0.00}{1}$ %	0
If total accessible habitat is:	
$\square > \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
·	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	1
Calculate: % undisturbed habitat $\frac{15.00}{}$ + [(% moderate and low intensity land uses)/2] $\frac{2.50}{}$ = $\frac{17.50}{}$ %	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	
✓ Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	-2
> 50% of 1 km Polygon is high intensity land use points = (-2)	
l ≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If score is: 4-6 = H 1-3 = M 1-3 = M Record the rating on	the first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	1
that applies to the wetland being rated.	1
Site meets ANY of the following criteria: points = 2	
It has 3 or more priority habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW priority species	
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan	
✓ Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If score is: $\boxed{2} = H \boxed{\checkmark} 1 = M \boxed{0} = L$ Record the rating of	the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: *NOTE:* This question is independent of the land use between the wetland unit and the priority habitat.

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.

Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 see web link above*).
- **▼ Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).
- ✓ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).

Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
☐ With a salinity greater than 0.5 ppt ☐ Yes –Go to SC 1.1 ✓ No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Preserve, state Park of Educational, Environmental, of Scientific Reserve designated under WAC 552-50-151?	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	Cat. I
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	Cat. I
Conservation Value?	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV	,
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No = Not a WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) most both the criteria for soils and vegetation in begs? Use the key	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? \square Yes – Go to SC 3.3 \square No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog	
pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate</i>	
the wetland based on its functions.	
Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered	
canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of	
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.	
Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	Cat. I
Yes = Category I No = Not a forested wetland for this section	
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from	
marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	
SC 5.1. Does the wetland meet all of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less	
than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).	Cat. II
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²) The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²) Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions. In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
	Cat. II
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2	
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
Yes = Category II No – Go to SC 6.3	Cat. III
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	C-4 11/
	Cat. IV
Category of wetland based on Special Characteristics	NA
If you answered No for all types, enter "Not Applicable" on Summary Form	l

Wetland name or number _____12-4

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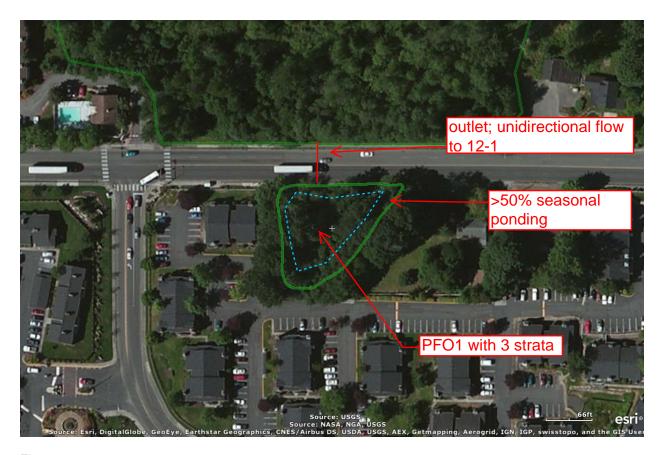


Figure 12-4-1



Figure 12-4-2



Figure 12-4-3

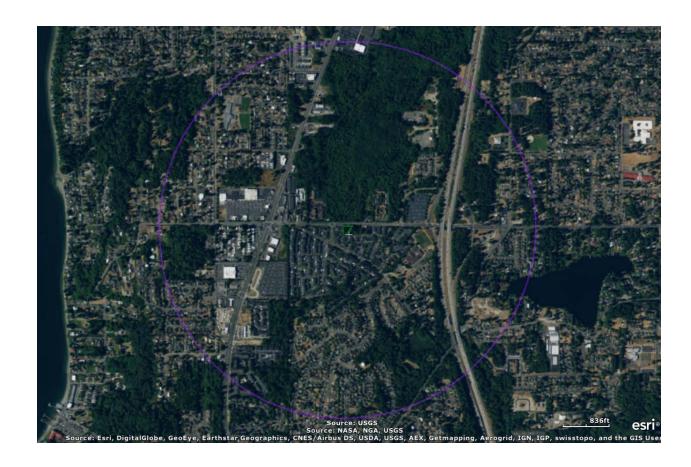
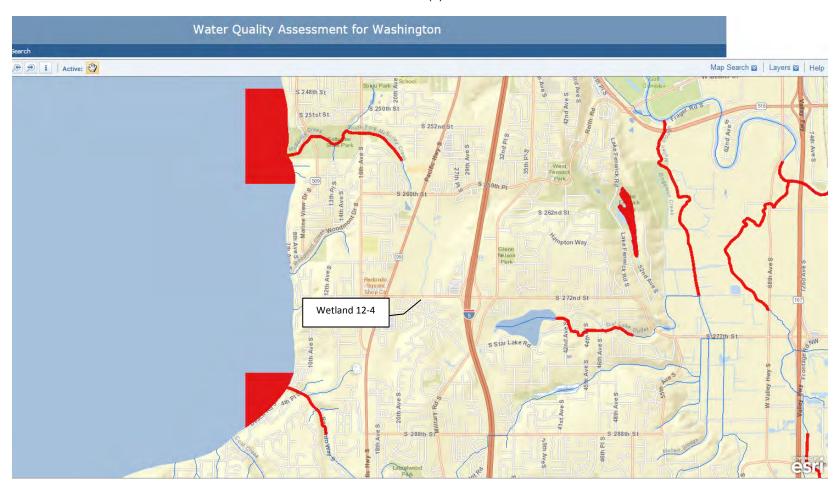


Figure 12-4-4

Wetland 12-4: 303(d) listed waters





http://www.ecy.wa.go

Vater Quality Improvement Projects (TMDLs)

'ater Quality Improvement > Water Quality Improvement Projects by WRIA 9: Duwamish-Green

VRIA 9: Duwamish-Green

ne following table lists overview information for water quality improvement projects (including total maximum daily loads, or TMDLs) for this water resource inventory area (WRIA). Please use links (where available) for more information on a project.

0 MILES 08 09 07 39 MILES 07 39

Counties

• King

Waterbody Name	Pollutants	Status**	TMDL Lead
Duwamish and Lower Green River	Ammonia-N	Approved by EPA	<u>Joan Nolan</u> 425-649-4425
Fauntleroy Creek	Fecal Coliform	Approved by EPA Has an implementation plan	<u>Joan Nolan</u> 425-649-4425
Fenwick Lake	Total Phosphorus	Approved by EPA (1993, Clean Lakes Program) Category 5, 2008 Water Quality Assessment	<u>Tricia Shoblom</u> 425-649-7288
Green River and Newaukum Creek	Temperature Dissolved Oxygen	Green River TMDL Approved by EPA Newaukum Creek TMDL Approved by EPA Has an implementation plan	<u>Joan Nolan</u> 425-649-4425
Lake Sawyer	Total Phosphorus	Approved by EPA Has an implementation plan	<u>Tricia Shoblom</u> 425-649-7288
Soos Creek	Fecal Coliform	Under development	<u>Dave Garland</u> 425-649-7031
	Aquatic Habitat Dissolved Oxygen Temperature	-	<u>Joan Nolan</u> 425-649-4425

^{**} Status will be listed as one of the following: Approved by EPA, Under Development or Implementation

For more information about WRIA 9:

- $\bullet \;\; \underline{\text{Waterbodies in WRIA 9}} \; \text{-} \; \text{using the Water Quality Assessment Query Tool}$
- Watershed Information for WRIA 9

Back to top of page

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^{*} The Department of Ecology and other state resource agencies frequently use a system of 62 "Water Resource Inventory Areas" or "WRIAS" to refer to the state's major watershed basins.

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wet	land (if known):13-	Date of site	visit: <u>3/21/13</u>	
Rated by P7	Traine Traine	d by Ecology? Yes √ No Da	te of training 5/2005	
SEC: TV	SEC: TWNSHP: 22N RNGE: 4E Is S/T/R in Appendix D? Yes No.			
	Map of wetland unit: Figure $\frac{1}{2}$	3 Estimated size 0.4 ac	- -	
	SUMMARY	OF RATING		
Category l	pased on FUNCTIONS provide	d by wetland		
I	II IV_✓			
Catanana	Screen 70	ore for Water Quality Functions	14	
	= Score >=70 I = Score 51-69	Score for Hydrologic Functions	5	
•	II = Score 30-50	Score for Habitat Functions	5	
Category IV = Score < 30		TOTAL score for Functions	24	
Category based on SPECIAL CHARACTERISTICS of wetland I II Does not Apply ✓ Final Category (choose the "highest" category from above)				
Summary of basic information about the wetland unit				
	Wetland Unit has Special	Wetland HGM Class		
	Characteristics	used for Rating		
	Estuarine Natural Heritage Wetland	Depressional Riverine	<u>Y</u>	
	Bog	Lake-fringe		
	Mature Forest	Slope		
	Old Growth Forest	Flats		
	Coastal Lagoon	Freshwater Tidal		

None of the above

Interdunal

Check if unit has multiple HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
3. Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? V NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded ? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).
✓ NO - go to 5 YES – The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 $\boxed{\checkmark}$ YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
vetland wetlands with special	
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

	WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure2	
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$ Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$ Wetland has persistent, ungrazed vegetation $< 1/10$ of area points $= 0$	Figure	
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2		
$ _{\mathbf{D}}$	Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods	7.00	
D	YES multiplier is 2 NO multiplier is 1 TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	Yes 14.00	

D	Depressional and Flats Wetlands	Points (only 1 score
	HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5 Total for D 3 Add the points in the boxes above	3
D	1	
	— Other YES multiplier is 2 NO multiplier is 1	No
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat		Points (only 1 score	
			per box)
H 1. Does the wetland unit have the <u>potential</u> to pr	ovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined		old for each	1 Struc.
class is ¼ acre or more than 10% of the area if unit i	s smaller than 2.5 acres.		0
Aquatic bed			0
Emergent plants	2011011)		
Scrub/shrub (areas where shrubs have >30% Forested (areas where trees have >30% cover			
If the unit has a forested class check if:	1)		
The forested class has 3 out of 5 strata (cano	ony sub-canony shrubs her	naceous	
moss/ground-cover) that each cover 20%		baccous,	
Add the number of vegetation structures that qualify. If	1		
That the number of vegetation structures that quality. If	4 structures or more	points = 4	
Man of Occupation constation along	3 structures	points $= 2$	
Map of Cowardin vegetation classes	2 structures	points = 1	
	1 structure	points = 0	
H 1.2. Hydroperiods (see p. 73)		<u>r</u>	Figure
Check the types of water regimes (hydroperiods) pr	esent within the wetland. Th	ie water	
regime has to cover more than 10% of the wetland or			1 type
descriptions of hydroperiods)	,		
Permanently flooded or inundated	4 or more types present	points = 3	0
Seasonally flooded or inundated	3 types present	points = 2	
Occasionally flooded or inundated	2 types present	point = 1	
Saturated only	1 type present	points = 0	
Permanently flowing stream or river in, or adj			
Seasonally flowing stream in, or adjacent to, to	he wetland		
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hydro	periods	
H 1.3. Richness of Plant Species (see p. 75)			_
Count the number of plant species in the wetland th	at cover at least 10 ft ² . (diffe	erent patches	<5 sp.
of the same species can be combined to meet the siz	e threshold)		0
You do not have to name the species.			
Do not include Eurasian Milfoil, reed canarygro	ass, purple loosestrife, Can	adian Thistle	
If you counted:		points $= 2$	
List species below if you want to:		points = 1	
willows older	< 5 species	points = 0	
willows, alder			

Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0
Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants 	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	0

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 Buffers (see p. 80)	Figure	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	1	
criterion that applies to the wetland is to be used in the rating. See text for definition of	1	
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer, (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, . Points = 3		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >		
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points = 2		
— Heavy grazing in buffer. Points = 1		
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 0. 		
fields, paving, basalt bedrock extend to edge of wetland Points = 0. Buffer does not meet any of the criteria above. Points = 1		
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest		
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel		
roads, paved roads, are considered breaks in the corridor).	No	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	140	
the question above?		
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR	Yes	
within 3 mi (6km) of a brackish of safe water estuary OR within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0 points		

Total for page 2

	T
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
1	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) $>$ 81 cm (32 in) dbh or $>$ 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	0
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile. points = 0	3	
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	5	
TOTAL for H 1 from page 14		
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1		

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? No \(\sqrt{ Is not a bog for purpose of rating} \) 2. YES = Category I

Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO <u>√</u> not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling,	
cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 acre (4350 square feet)	Cat. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)		
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland		
Ownership or WBUO)?		
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating		
If you answer yes you will still need to rate the wetland based on its		
functions.		
In practical terms that means the following geographic areas:		
 Long Beach Peninsula- lands west of SR 103 		
Grayland-Westport- lands west of SR 105		
Ocean Shores-Copalis- lands west of SR 115 and SR 109		
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?		
YES = Category II $NO - go to SC 6.2$	Cat. II	
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?		
YES = Category III	Cat. III	
Category of wetland based on Special Characteristics		
Choose the "highest" rating if wetland falls into several categories, and record on	N/A	
p. 1.		
If you answered NO for all types enter "Not Applicable" on p.1		





0 20 40 80 120 160

Legend Wetland Border ---- Forested

WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetlan	nd (if known):	15-1	Date of site	visit: 3/21/13
Rated by P To	gher _{Trai}	ined by I	Ecology? Yes √ No Da	ate of training 5/200
SEC: <u>32</u> TWN	ISHP: <u>22N</u> RNGE: <u>4E</u> Is S/T	7/R in Ap	pendix D? Yes No √	<u>′</u>
	Map of wetland unit: Figure	15_	Estimated size 7.3 ac	<u> </u>
	SUMMAR	XY OF	RATING	
Category bas	sed on FUNCTIONS provi	ded by	wetland	
I 1	II III_✓ IV			
	~ -0	Score fo	or Water Quality Functions	26
Category I = Category II =		Score	e for Hydrologic Functions	
	= Score 30-50		Score for Habitat Functions	
Category IV =	= Score < 30	TO	TAL score for Functions	
I 1	sed on SPECIAL CHARA II Does not Apply ✓ Final Category (choose the			II
		4 • 1		
V	Summary of basic inforn Vetland Unit has Special	nation ai	Wetland HGM Class	
	Characteristics		used for Rating	
	Estuarine	D	epressional	√
N	Natural Heritage Wetland	R	liverine	
	Bog		ake-fringe	
	Mature Forest		lope	
C	Old Growth Forest	F	lats	

Coastal Lagoon Interdunal

None of the above

Freshwater Tidal

Check if unit has multiple HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts pe thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? ▼NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES – The wetland class is Slope
1 10 50 to 5 110 wording class is stope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
NO - go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D					
	WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)			
	improve water quality				
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?				
	D 1.1 Characteristics of surface water flows out of the wetland:				
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing")				
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS				
	definitions)	4			
D	YES points = 4				
	NO $points = 0$				
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure			
	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$	5			
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$				
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$				
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$				
	Map of Cowardin vegetation classes				
	D1.4 Characteristics of seasonal ponding or inundation.	Figure			
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out				
	sometime uniting the year. Bo not could the area that is permanently political. Estimate				
	area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4				
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2				
	Area seasonally pended is $< \frac{1}{4}$ total area of wetland points = 0				
	Map of Hydroperiods				
D	Total for D 1 Add the points in the boxes above	13.00			
D	D 2. Does the wetland unit have the opportunity to improve water quality?	(see p. 44)			
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1				
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	00.00			
D	Add score to table on p. 1	26.00			

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to					
	reduce flooding and stream degradation					
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?					
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4				
D						
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3				
D	Total for D 3 Add the points in the boxes above	12				
D						
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	12				

These questions apply to wetlands of all HABITAT FUNCTIONS - Indicators that unit f		t habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential	to provide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)		-	Figure
Check the types of vegetation classes present (as a		shold for each	3 Struc.
class is ¼ acre or more than 10% of the area if	funit is smaller than 2.5 acres.		
Aquatic bed			2
Emergent plants Scrub/shrub (areas where shrubs have >	200/ agyar)		
Forested (areas where trees have >30%			
If the unit has a forested class check if:	Covery		
The forested class has 3 out of 5 strata	(canopy, sub-canopy, shrubs, h	erbaceous.	
moss/ground-cover) that each cover			
Add the number of vegetation structures that qual	1 00		
•	4 structures or more	points $= 4$	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
	2 structures	points = 1	
	1 structure	points $= 0$	
H 1.2. Hydroperiods (see p. 73)		TI.	Figure
Check the types of water regimes (hydroperio			3 types
regime has to cover more than 10% of the wetle descriptions of hydroperiods)	ana or ¼ acre to count. (see tex	tjor	
Permanently flooded or inundated	4 or more types preser	nt points $= 3$	2
Seasonally flooded or inundated	3 types presen	_	
Occasionally flooded or inundated	2 types present	_	
✓ Saturated only	1 type present	_	
Permanently flowing stream or river in,	• • •		
Seasonally flowing stream in, or adjacen	nt to, the wetland		
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points Map of hydroperiods			
H 1.3. Richness of Plant Species (see p. 75)			F 40
Count the number of plant species in the wetla		ifferent patches	5 -19 sp.
of the same species can be combined to meet t	the size threshold)		1
You do not have to name the species.			
Do not include Eurasian Milfoil, reed can			
If you counted		points = 2	
List species below if you want to:	5 - 19 species < 5 species	points = 1	
	< 3 species	points $= 0$	

Total for page 5

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	
mudflats) is high, medium, low, or none.	Low
	1
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	1
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
Standing snags (diameter at the bottom > 4 inches) in the wetlandUndercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 Buffers (see p. 80)		
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	Figure	
criterion that applies to the wetland is to be used in the rating. See text for definition of	3	
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer. (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, . Points = 3		
✓ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >		
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points = 2		
— Heavy grazing in buffer. Points = 1		
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled		
fields, paving, basalt bedrock extend to edge of wetland — Buffer does not meet any of the criteria above. Points = 0. Points = 1		
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest		
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel		
roads, paved roads, are considered breaks in the corridor).		
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25		
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in		
the question above?		
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0 points		

Total for page 4

WOON I I I I I I I I I I I I I I I I I I	I
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) $>$ 81 cm (32 in) dbh or $>$ 200 years of age. (Mature forests) Stands	1 P.H.
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	1
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile.	3
There are no wetlands within ½ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	
TOTAL for H 1 from page 14	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	
species. If the non-native <i>Spartina</i> spp. are the only species that cover	Dual
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? No \(\sqrt{ Is not a bog for purpose of rating} \) 2. YES = Category I

Cat. I

SC 4.0 Forested Wetlands (see p. 90)

SC 5.0 Wetlands in Coastal Lagoons (see n. 91)	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
the Department of Fish and Wildlife's forests as priority habitats? <i>If you answer yes you will still need to rate the wetland based on its functions.</i>	
Does the wetland unit have at least 1 acre of forest that meet one of these criteria for	

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO ✓ not a wetland in a coastal lagoon

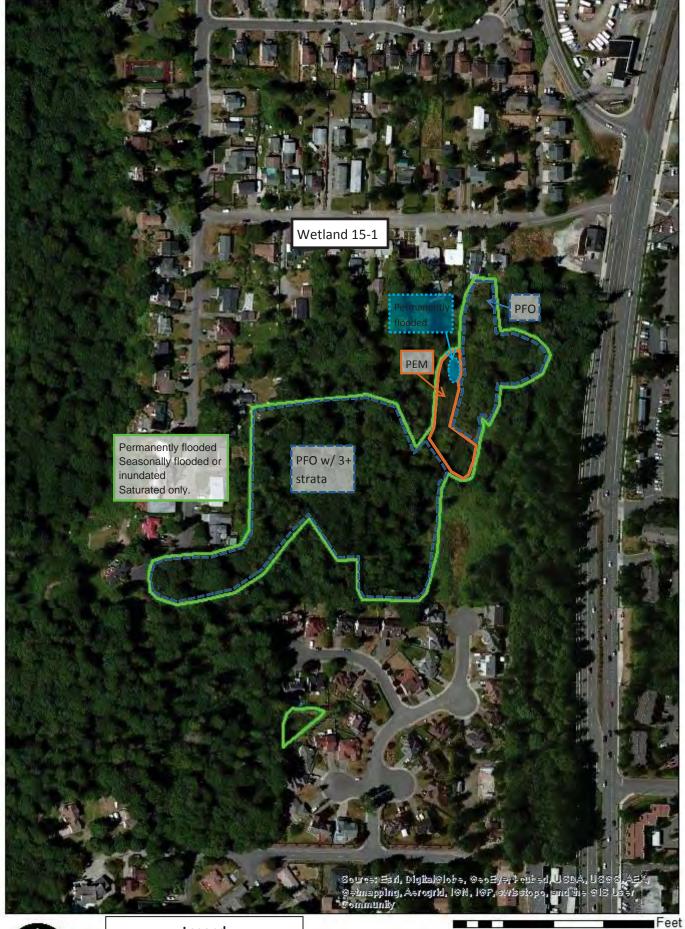
SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- The wetland is larger than 1/10 acre (4350 square feet)

YES = Category INO = Category II Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	I W / A
If you answered NO for all types enter "Not Applicable" on p.1	





Legend

---- Wetland Boundry

---- Forested Veg

Emergent Veg

Permanently Flooded

0 65 130 260 390 520

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	16-1 Date of site visit: "	
	ained by Ecology? Yes ✓ No Date of training 5/2005	
SEC: 7 TWNSHP: 21N RNGE: 4E Is S/	T/R in Appendix D? Yes No ✓	
Map of wetland unit: Figure	e 15 Estimated size 0.2 ac	
SUMMAI	RY OF RATING	
Category based on FUNCTIONS prov	vided by wetland	
I II III_✓ IV		
Cotonomy I. Cooms > 70	Score for Water Quality Functions 10	
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 2	
Category III = Score 30-50	Score for Habitat Functions 10	
Category IV = Score < 30	10	
TOTAL score for Functions 22		
Category based on SPECIAL CHARACTERISTICS of wetland I II Does not Apply ✓ Final Category (choose the "highest" category from above)		
	mation about the wetland unit	
Wetland Unit has Special	Wetland HGM Class	
Characteristics Estuarine	used for Rating Depressional ✓	
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)		NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
 Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded ? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).
✓ NO - go to 5 YES – The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
NO - go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)
	improve water quality	per box)
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"]	2
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	
	definitions)	0
D	YES points = 4	
	NO $points = 0$	
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure
_	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$	3
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$	3
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$	
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$	
	Map of Cowardin vegetation classes	
	D1.4 Characteristics of seasonal ponding or inundation.	Figure
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out	0
וט	sometime during the year. Do not count the area that is permanently ponded. Estimate	
	area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4	
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2	
	Area seasonally pended is $< \frac{1}{4}$ total area of wetland points = 0	
	Map of Hydroperiods	
D		5.00
D	D 2. Does the wetland unit have the opportunity to improve water quality?	(see p. 44)
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1	multiplier Yes
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	40.00
D	Add score to table on p. 1	10.00

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5 Total for D 3 Add the points in the boxes above	0
	1	(see p. 49)
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other WEST At It is a 2 and NO and the It is a 1	
_	YES multiplier is 2 NO multiplier is 1 TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4	No
D	Add score to table on p. 1	2

These questions apply to wetlands of all HGM classes.			Points
HABITAT FUNCTIONS - Indicators that unit function	ons to provide important l	nabitat	(only 1 score per box)
H 1. Does the wetland unit have the potential to pr	ovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined	d by Cowardin)- Size thresh	old for each	1 Struc.
class is ¼ acre or more than 10% of the area if unit i	s smaller than 2.5 acres.		
Aquatic bed			0
<u>✓</u> Emergent plants			
Scrub/shrub (areas where shrubs have >30%			
Forested (areas where trees have >30% cover	()		
If the unit has a forested class check if:	1 1 1 1	•	
The forested class has 3 out of 5 strata (cano			
moss/ground-cover) that each cover 20%	1		
Add the number of vegetation structures that qualify. If	4 structures or more	points = 4	
	3 structures	points $= 4$ points $= 2$	
Map of Cowardin vegetation classes	2 structures	points = 2 $points = 1$	
	1 structure	points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73)	1 Structure	points = 0	Figure
Check the types of water regimes (hydroperiods) pro	esent within the wetland. The	he water	
regime has to cover more than 10% of the wetland or			1 type
descriptions of hydroperiods)	,		
Permanently flooded or inundated	4 or more types present	points = 3	0
Seasonally flooded or inundated	3 types present	points $= 2$	
Occasionally flooded or inundated	2 types present	point = 1	
Saturated only	1 type present	points = 0	
Permanently flowing stream or river in, or adjacent to, the wetland			
Seasonally flowing stream in, or adjacent to, the	he wetland		
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hydro	periods	
H 1.3. Richness of Plant Species (see p. 75)			5
Count the number of plant species in the wetland the		erent patches	<5 sp.
of the same species can be combined to meet the siz	e threshold)		0
You do not have to name the species.			
Do not include Eurasian Milfoil, reed canarygra			
If you counted:		points = 2	
List species below if you want to:		points $= 1$	
	< 5 species	points = 0	

Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0
Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants 	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	0

Comments

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Total for page 4

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm) Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the connections do not have to be relatively undisturbed. Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre). Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife [full descriptions in WDFW PHS report p. 152). Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock. Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full descriptions in WDFW PHS report p. 158). ✓ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161). ✓ Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Nearshore: Relatively undisturbed nearshore
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Appendix A).
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under
the earth in soils, rock, ice, or other geological formations and is large enough to contain a
human.
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine
tailings. May be associated with cliffs.
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)
long.
If wetland has 3 or more priority habitats = 4 points
If wetland has 2 priority habitats = 3 points
If wetland has 1 priority habitat = 1 point No habitats = 0 points
Note: All vegetated wetlands are by definition a priority habitat but are not included in this
list. Nearby wetlands are addressed in question H 2.4)

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile	3
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	10
TOTAL for H 1 from page 14	0
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	10

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

"bog" plant species in Table 3 are present, the wetland is a bog.

you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested Wetlands (see p. 90)	
Does the wetland unit have at least 1 acre of forest that meet one of these criteria for	
the Department of Fish and Wildlife's forests as priority habitats? If you answer yes	
you will still need to rate the wetland based on its functions.	
— Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests : (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1 NO

NO ✓ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

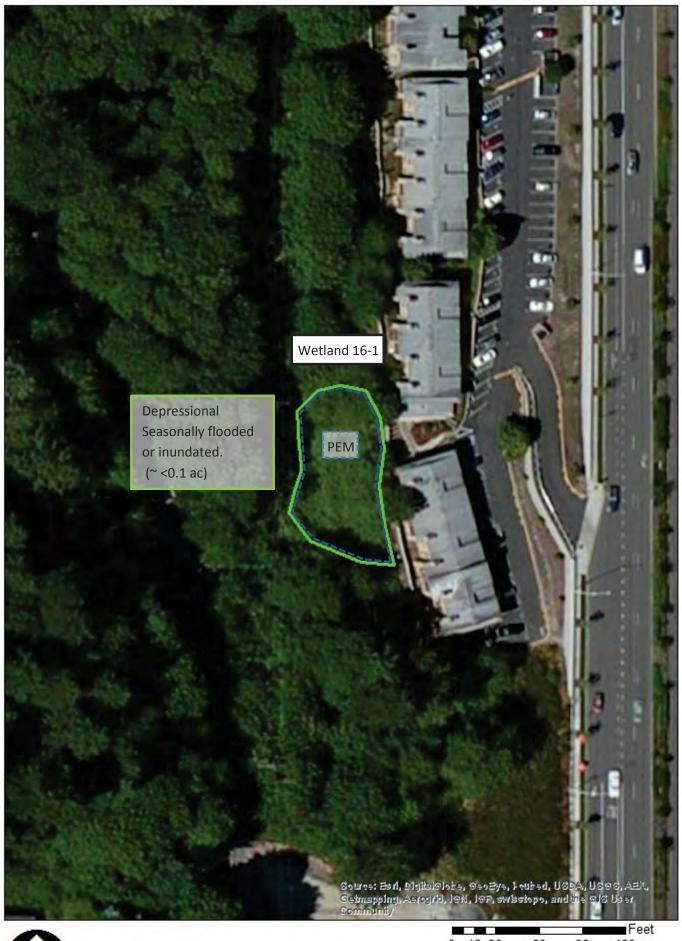
— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	







WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	17-1	Date of site vis	it: 3/21/13
Rated by P Togher	Trained by Ecology?	Yes <u>√</u> No Date	of training 5/200
SEC: <u>4</u> TWNSHP: <u>21N</u> RNGE: <u>4E</u>			
Map of wetland unit:	Figure 17 Estima	ated size <0.1 ac	
SUM	MARY OF RATI	NG	
Category based on FUNCTIONS I II III_✓ IV		d	
	Score for Water	Quality Functions	16
Category I = Score >=70 Category II = Score 51-69	Score for Hyo		7
Category III = Score 30-50	-	TT 1.2 / E	8
Category IV = Score < 30	TOTAL sc		31
Category based on SPECIAL CI I II Does not App		of wetland	
Final Category (cho		ory from above)	III
Summary of basic	c information about the	wetland unit	
Wetland Unit has Specia		d HGM Class	
Characteristics Estuarine	Used Depression	for Rating value on al	4
Natural Heritage Wetlar	•	viiai 🔻	+
Bog	Lake-frin	ige	+
Mature Forest	Slope		7

Flats

Freshwater Tidal

Check if unit has multiple HGM classes present

Old Growth Forest

Coastal Lagoon Interdunal

None of the above

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
 Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded ? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).
✓ NO - go to 5 YES – The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 $\boxed{\checkmark}$ YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)		
D	improve water quality D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)		
	D 1.1 Characteristics of surface water flows out of the wetland:			
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing			
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	0		
D	$\begin{array}{c} \textit{definitions}) \\ \text{YES} & \text{points} = 4 \\ \text{NO} & \text{points} = 0 \end{array}$			
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure		
D	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$ Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$	5		
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$ Map of Cowardin vegetation classes			
	D1.4 Characteristics of seasonal ponding or inundation.	Figure		
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4			
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods			
D		8.00		
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1			
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	16.00		
	Add score to table on p. 1	10.00		

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5 Total for D 3 Add the points in the boxes above	3
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other	
	YES multiplier is 2 NO multiplier is 1	No
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 **Add score to table on p. 1	7

These questions apply to wetlands of all HC HABITAT FUNCTIONS - Indicators that unit func		nt habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to p	provide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defin	ed by Cowardin)- Size thre	shold for each	1 Struc.
class is ¼ acre or more than 10% of the area if unit	is smaller than 2.5 acres.		
Aquatic bed			0
Emergent plants	,		
Scrub/shrub (areas where shrubs have >309	,		
✓ Forested (areas where trees have >30% cov If the unit has a forested class check if:	er)		
The forested class has 3 out of 5 strata (car	nony sub-canony shrubs k	erbaceous	
moss/ground-cover) that each cover 209			
Add the number of vegetation structures that qualify.		OII	
That the number of regeration structures that quality).	4 structures or more	points = 4	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
Map of Cowardin vegetation classes	2 structures	points = 1	
	1 structure	points = 0	
H 1.2. <u>Hydroperiods (see p. 73)</u>			Figure
Check the types of water regimes (hydroperiods) p			1 type
regime has to cover more than 10% of the wetland	or ½ acre to count. (see tex	t for	i typo
descriptions of hydroperiods)			0
Permanently flooded or inundated	4 or more types prese	_	
Seasonally flooded or inundated	3 types presen	_	
Occasionally flooded or inundated	2 types presen		
✓ Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or ac Seasonally flowing stream in, or adjacent to,			
Seasonary flowing stream in, or adjacent to, Lake-fringe wetland = 2 points	the wettand		
Freshwater tidal wetland = 2 points	Map of hy	droperiods	
H 1.3. Richness of Plant Species (see p. 75)	map or my		
Count the number of plant species in the wetland t	hat cover at least 10 ft ² (d	lifferent natches	<5 sp.
of the same species can be combined to meet the s		ijjerem paicnes	
You do not have to name the species.	ize in esticia)		0
Do not include Eurasian Milfoil, reed canaryg	rass, purple loosestrife, C	anadian Thistle	
If you counted:	> 19 species	points = 2	
List species below if you want to:	5 - 19 species	points = 1	
	< 5 species	points = 0	

Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0
Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) 	
At least ½ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	0

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 <u>Buffers</u> (see p. 80)	Figure	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	_	
criterion that applies to the wetland is to be used in the rating. See text for definition of		
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer. (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, . Points = 3		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >		
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points = 2		
Heavy grazing in buffer.Points = 1		
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled		
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.		
\checkmark Buffer does not meet any of the criteria above. Points = 1		
Aerial photo showing buffers		
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest		
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	No	
roads, paved roads, are considered breaks in the corridor).		
YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25		
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	No	
the question above?		
YES = 2 points $(go \ to \ H \ 2.3)$ NO = H 2.2.3		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0 points		

Total for page 2

	T
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	2 P.H.
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Y Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
✓ Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
	3
long. If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points If wetland has 1 priority habitats = 1 point No habitate = 0 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile. points = 0	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	8
TOTAL for H 1 from page 14	0
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	8

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87)

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

Cat. I

SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR)

S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES_____ – contact WNHP/DNR (see p. 79) and go to SC 2.2

NO <u></u>✓

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO **✓** not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3

 No go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3

No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Is a bog for purpose of rating No -

No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	

- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO ✓ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ³/₄ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category INO = Category II Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

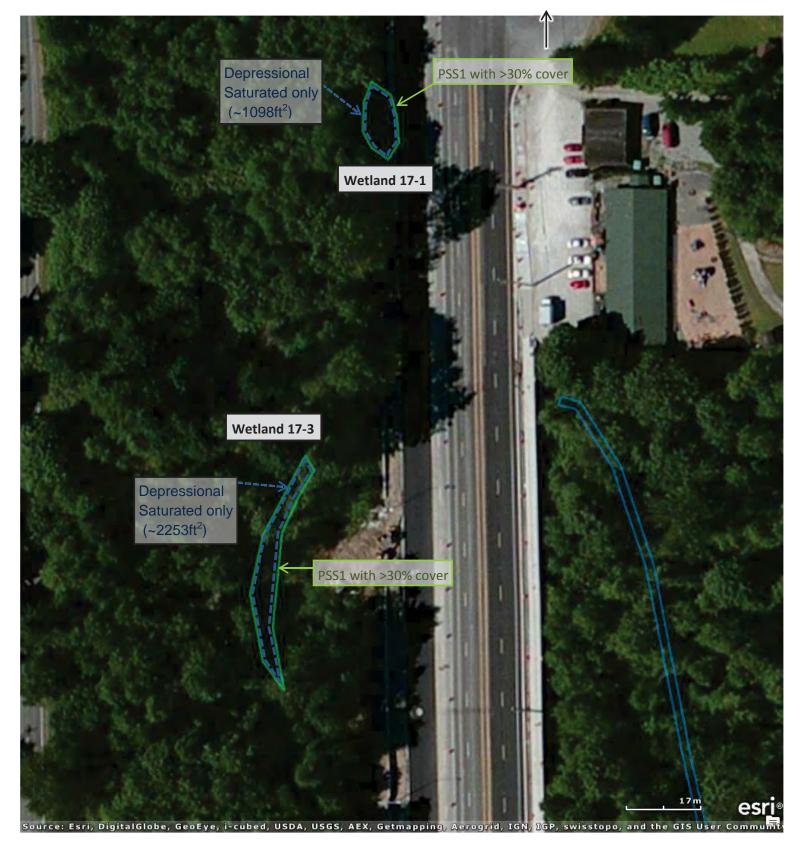
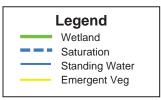




Figure 20-1. Wetland 20-1



WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetlan	d (if known):	17-2		Date of site	visit:	28/14
Rated by P Too	gher/ L Danielski	_ Trained b	y Ecology?	Yes √ No D	ate of train	ing_5/2005
SEC: 4 TWN	SHP: 21N RNGE: 4E	Is S/T/R in	Appendix D	? Yes No_	_	
	Map of wetland unit: F	igure 17	_ Estima	ted size 4.9 AC	<u> </u>	
	SUMN	MARY C	F RATI	NG		
Category bas	sed on FUNCTIONS	provided	by wetland	d		
I I	ı ıı_✓ ıv					
Cotogogy I = 9	Saara > -70	Scor	e for Water (Quality Functions	s 18	
Category II = S	I	So	core for Hyd	rologic Functions	s 7	
Category III =	l .		Score for l	Habitat Functions	s 17	
Category IV =	= Score < 30		TOTAL sco	re for Functions	s 42	
Category bas	sed on SPECIAL CHA	ARACTE	RISTICS	of wetland		
	I Does not Apply					
F	inal Category (choo	se the "hig	hest" catego	ory from above)	Ш	
	Summary of basic i	information	n about the	wetland unit		
	Vetland Unit has Special			d HGM Class		
	haracteristics			for Rating		
	stuarine atural Heritage Wetland		Depression Riverine	nal	Y	
	aturai meritage vvettallu		Kiverine		 	

Building of basic information about the wettand unit			
Wetland Unit has Special		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine		Depressional	\
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	/	Check if unit has multiple	
	V	HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts pe thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? ▼NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES – The wetland class is Slope
1 10 50 to 5 110 wording class is stope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
NO - go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)			
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?				
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing				
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	0			
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area Wetland has persistent, ungrazed, vegetation > = 1/2 of area Wetland has persistent, ungrazed vegetation > = 1/10 of area Wetland has persistent, ungrazed vegetation < 1/10 of area Points = 1 Wetland has persistent, ungrazed vegetation < 1/10 of area Points = 0	Figure			
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 0 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0				
D	Map of Hydroperiods	9.00			
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1				
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	18.00			

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)				
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?					
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2				
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0					
D	Marks of ponding less than 0.5 ft points = 0 D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	5				
D	Total for D 3 Add the points in the boxes above	7				
D	,					
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4	7				
	Add score to table on p. 1					

These questions apply to wetlands of all HGM classes.		Points	
HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			(only 1 score per box)
H 1. Does the wetland unit have the potential to pr	ovide habitat for many s	pecies?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each			2 Struc.
class is $\frac{1}{4}$ acre or more than 10% of the area if unit is smaller than 2.5 acres.			
Aquatic bed			1
Emergent plants Scrub/shrub (areas where shrubs have >30%	aavar)		
Forested (areas where trees have >30% cover			
If the unit has a forested class check if:	1)		
The forested class has 3 out of 5 strata (cano	ny, sub-canopy, shrubs, herb	paceous.	
moss/ground-cover) that each cover 20%		, , ,	
Add the number of vegetation structures that qualify. If			
	4 structures or more	points = 4	
Map of Cowardin vegetation classes	3 structures	points = 2	
map of continuent of general continuent	2 structures	points = 1	
	1 structure	points $= 0$	
H 1.2. <u>Hydroperiods</u> (see p. 73)			Figure
Check the types of water regimes (hydroperiods) pr			2 types
regime has to cover more than 10% of the wetland or	¹ /4 acre to count. (see text fo	or .	1
descriptions of hydroperiods)	A on more types present	mainta — 2	1
Permanently flooded or inundated Seasonally flooded or inundated	4 or more types present 3 types present	points = 3 $points = 2$	
Occasionally flooded or inundated	2 types present	points $= 2$ point $= 1$	
Saturated only	1 type present	point = 1 $points = 0$	
Permanently flowing stream or river in, or adj		pomes	
Seasonally flowing stream in, or adjacent to, the			
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points Map of hydroperiods			
H 1.3. Richness of Plant Species (see p. 75)			5 40
Count the number of plant species in the wetland the	at cover at least 10 ft². (<i>diffe</i>	rent patches	5 -19 sp.
of the same species can be combined to meet the siz	e threshold)		1
You do not have to name the species.			
Do not include Eurasian Milfoil, reed canarygra			
If you counted:		points $= 2$	
List species below if you want to:		points = 1	
	< 5 species p	points = 0	

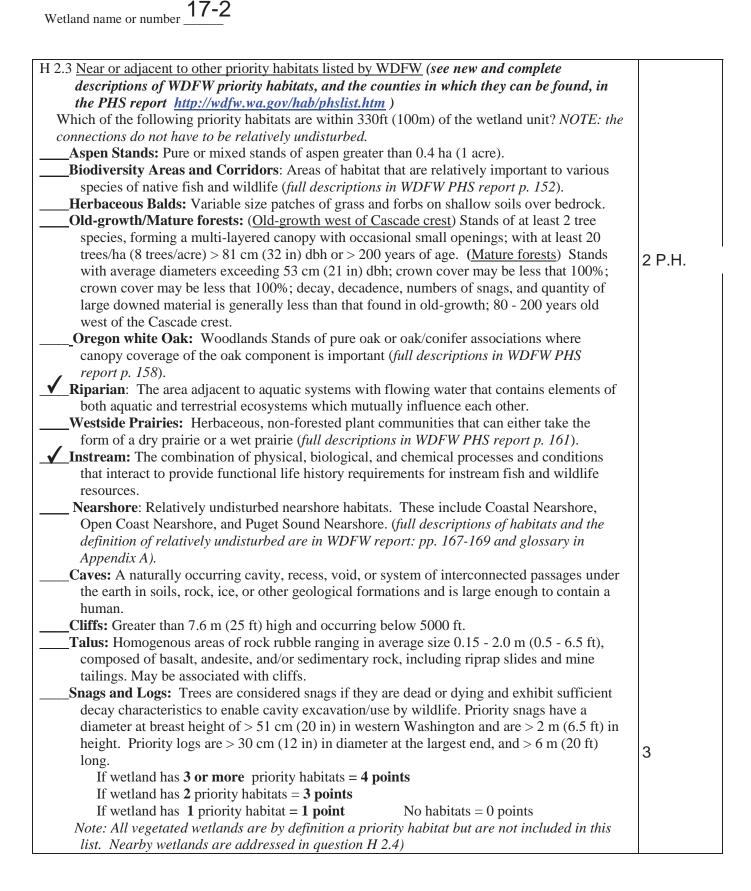
Total for page 3

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	
	0
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points [riparian braided channels]	
NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	4
Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	7

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."	3
 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use)	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. Points = 2 Heavy grazing in buffer. Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Buffer does not meet any of the criteria above. Points = 1	
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	No
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above?	No
YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR	Yes
within 1 mi of a lake greater than 20 acres? YES = 1 point NO = 0 points	

Total for page 4



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. points = 3 There are no wetlands within ½ mile. points = 0	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	10
TOTAL for H 1 from page 14	7
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	17

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO **√** YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western

red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of 	

NO = Category II

shrub, forest, or un-grazed or un-mowed grassland.

— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

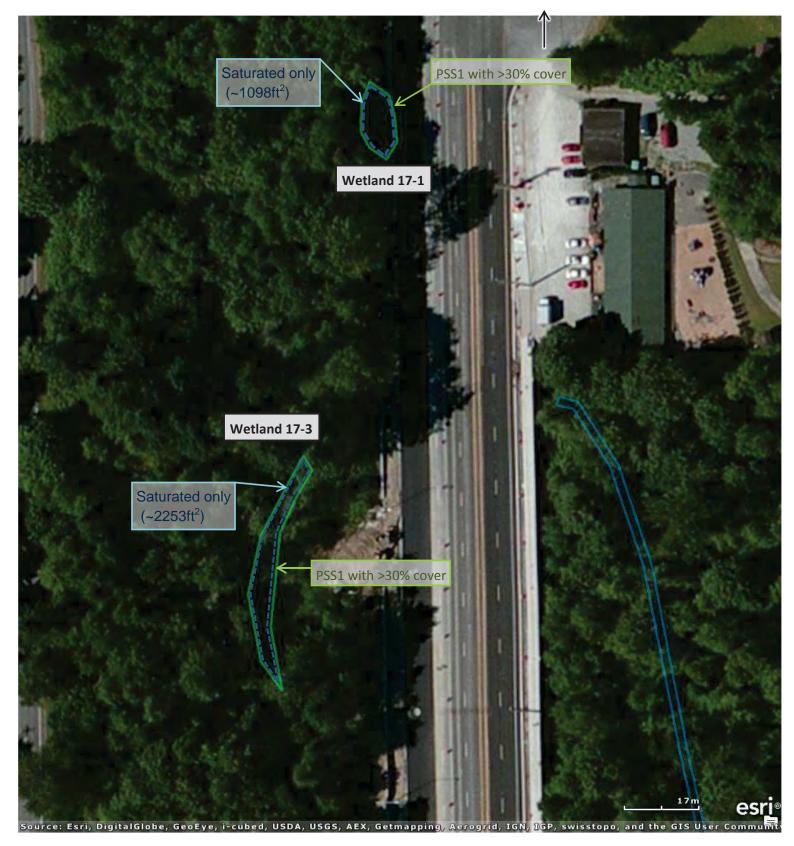
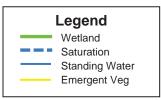




Figure 20-1. Wetland 20-1



WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	17-3	Date of site vis	sit: 3/21/13
Rated by P Togher	Trained by Ecology?	Yes √ No Date	of training 5/200
SEC: 4 TWNSHP: 21N RNGE: 4E	Is S/T/R in Appendix D	? Yes No <u></u> ✓	
Map of wetland unit	t: Figure <u>17</u> Estima	ted size 0.7 ac	
SUN	MMARY OF RATI	NG	
Category based on FUNCTION	S provided by wetland	d	
I II III_✓ IV_	_		
	Score for Water (Quality Functions	16
Category I = Score >=70	Score for Hyd	rologic Functions	7
Category II = Score 51-69 Category III = Score 30-50	•	Habitat Functions	
Category IV = Score < 30		ı	10
	TOTAL sco	re for Functions	33
Category based on SPECIAL C I II Does not Ap Final Category (ch			III
	sic information about the		_
Wetland Unit has Speci		d HGM Class	
Characteristics Estuarine	Depression	for Rating	
Natural Heritage Wetla		nal 🗸	
Bog	Lake-fring	De l	
Mature Forest	Slope	>~	
Old Growth Forest	Flats		

Coastal Lagoon

None of the above

Interdunal

Freshwater Tidal

Check if unit has multiple HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)		NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts pe thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? ▼NO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES – The wetland class is Slope
1 10 50 to 5 110 wording class is stope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
NO - go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)
D	improve water quality D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	3
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	0
D	$\begin{array}{c} \textit{definitions}) \\ \text{YES} & \text{points} = 4 \\ \text{NO} & \text{points} = 0 \end{array}$	
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure
D	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$ Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$	5
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points $=0$ Map of Cowardin vegetation classes	
	D1.4 Characteristics of seasonal ponding or inundation.	Figure
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4	0
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods	
D		8.00
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other	(see p. 44) multiplier Yes
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	16.00
	Add score to table on p. 1	10.00

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)			
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)			
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0				
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0			
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5 Total for D 3 Add the points in the boxes above	3			
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other	(see p. 49)			
	YES multiplier is 2 NO multiplier is 1	No			
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 **Add score to table on p. 1	7			

These questions apply to wetlands of all HGM classes.			Points (only 1 score	
HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat				
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?				
H 1.1 Vegetation structure (see p. 72)				
Check the types of vegetation classes present (as defined		ld for each	1 Struc.	
class is ¼ acre or more than 10% of the area if unit i	s smaller than 2.5 acres.			
Aquatic bedEmergent plants			0	
Scrub/shrub (areas where shrubs have >30%	cover)			
Forested (areas where trees have >30% cover				
If the unit has a forested class check if:	-,			
The forested class has 3 out of 5 strata (cano	ppy, sub-canopy, shrubs, herb	aceous,		
moss/ground-cover) that each cover 20%				
Add the number of vegetation structures that qualify. If				
	4 structures or more	points = 4		
Map of Cowardin vegetation classes	3 structures	points = 2		
	2 structures	points $= 1$		
II 10 II 1 ' 1 / 70	1 structure	points = 0	F:	
H 1.2. <u>Hydroperiods</u> (see p. 73)	agant within the west and Th		Figure	
Check the types of water regimes (hydroperiods) pr regime has to cover more than 10% of the wetland or			1 type	
descriptions of hydroperiods)	74 acre to count. (see text jo	,		
Permanently flooded or inundated	4 or more types present	points = 3	0	
Seasonally flooded or inundated	3 types present	points = 2		
Occasionally flooded or inundated	2 types present	point = 1		
Saturated only	1 type present	points $= 0$		
Permanently flowing stream or river in, or adj	acent to, the wetland			
Seasonally flowing stream in, or adjacent to, t	he wetland			
Lake-fringe wetland = 2 points				
Freshwater tidal wetland = 2 points	Map of hydro	periods		
H 1.3. Richness of Plant Species (see p. 75)	2		4F 0D	
Count the number of plant species in the wetland th		rent patches	<5 sp.	
of the same species can be combined to meet the siz	e threshold)		0	
You do not have to name the species.		1. 7511		
Do not include Eurasian Milfoil, reed canarygra				
If you counted: List species below if you want to:		points = 2 points = 1		
List species below if you want to.		points = 1 points = 0		
	(5 species p			

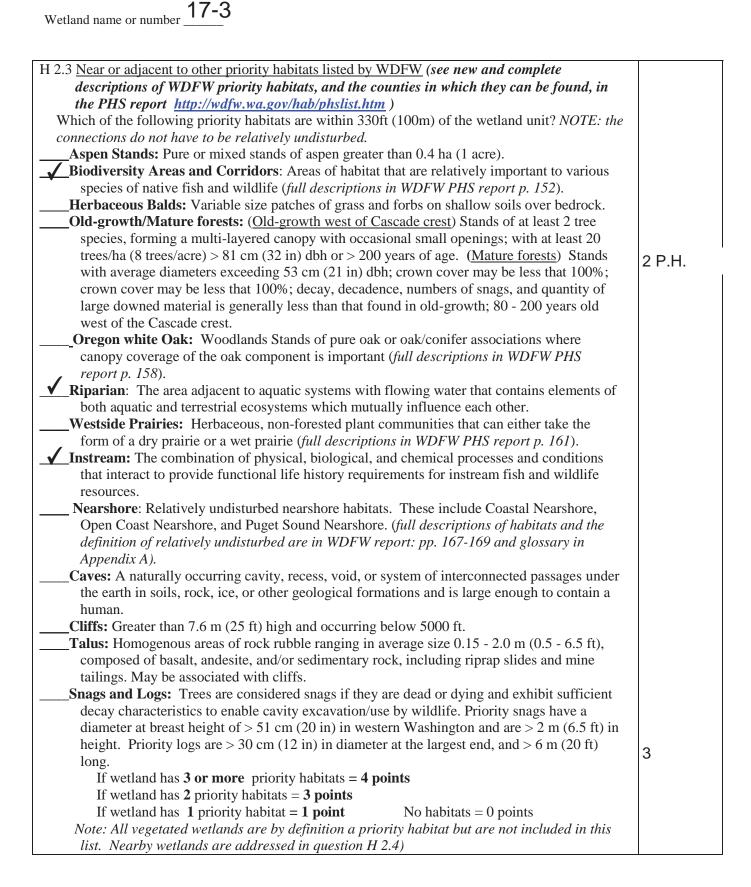
Total for page 0

H 1.4. Interspersion of habitats (see p. 76)	Figure		
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or			
mudflats) is high, medium, low, or none.	None		
	0		
None = 0 points Low = 1 point Moderate = 2 points			
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes			
H 1.5. Special Habitat Features: (see p. 77)			
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.			
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0		
Standing snags (diameter at the bottom > 4 inches) in the wetland			
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that			
have not yet turned grey/brown)			
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas			
that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants			
NOTE: The 20% stated in early printings of the manual on page 78 is an error.			
H 1. TOTAL Score - potential for providing habitat	+		
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	0		

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 Buffers (see p. 80)	Figure	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	3	
criterion that applies to the wetland is to be used in the rating. See text for definition of	3	
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer. (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, . Points = 3		
✓ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >		
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points = 2		
— Heavy grazing in buffer. Points = 1		
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 0. 		
Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest		
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel		
roads, paved roads, are considered breaks in the corridor).	No	
YES = 4 points $(go \ to \ H \ 2.3)$ NO = go to H 2.2.2		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in		
the question above?		
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0 points		

Total for page 4



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. points = 3 There are no wetlands within ½ mile. points = 0	3	
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	10	
TOTAL for H 1 from page 14		
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1		

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87)

Cat. I

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR)

S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___

YES____ - contact WNHP/DNR (see p. 79) and go to SC 2.2

NO <u></u>✓

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

YES = Category I

NO **✓** not a Heritage Wetland

SC 3.0 Bogs (see p. 87)

Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.

- 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3

 No go to Q. 2
- 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

Yes - go to Q. 3

No - Is not a bog for purpose of rating

3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

Yes – Is a bog for purpose of rating

No - go to Q. 4

NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

2. YES = Category I

No ✓ Is not a bog for purpose of rating

Cat. I

SC 4	4.0	Forested	We	tlands	(see	p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

— Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO **✓** not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO ✓ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)		
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland		
Ownership or WBUO)?		
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating		
If you answer yes you will still need to rate the wetland based on its		
functions.		
In practical terms that means the following geographic areas:		
 Long Beach Peninsula- lands west of SR 103 		
Grayland-Westport- lands west of SR 105		
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 		
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?		
YES = Category II $NO - go to SC 6.2$	Cat. II	
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II	
YES = Category III	Cat. III	
Category of wetland based on Special Characteristics		
Choose the "highest" rating if wetland falls into several categories, and record on	N/A	
p. 1.	13//	
If you answered NO for all types enter "Not Applicable" on p.1		

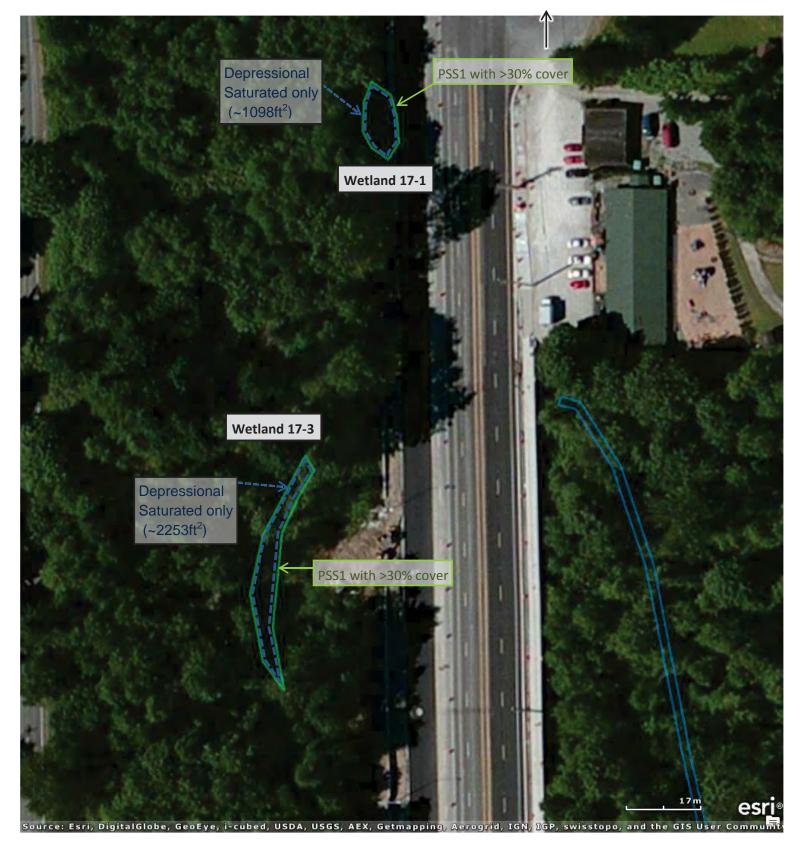
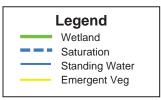




Figure 20-1. Wetland 20-1



WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): 20-1	Date of site visit: 3/22/13
Rated by P. Togher	Trained by Ecology? Yes ✓ No Date of training 5/200
SEC: <u>10</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u>	Is S/T/R in Appendix D? Yes No ✓
Map of wetland unit: F	igure 20 Estimated size 2.5 ac
SUMN	MARY OF RATING
Category based on FUNCTIONS I I II III IV	provided by wetland
	Score for Water Quality Functions 14
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 8
Category III = Score 30-50	Score for Habitat Functions 8
Category IV = Score < 30	TOTAL score for Functions 30
Category based on SPECIAL CHA I II Does not Apply Final Category (choose	
Summary of basic i	information about the wetland unit
Wetland Unit has Special Characteristics	Wetland HGM Class used for Rating
Estuarine	Depressional <
Natural Heritage Wetland	
Bog Mature Forest	Lake-fringe Slope
Mature Porest	Diopc

Flats

Freshwater Tidal

Check if unit has multiple HGM classes present

Old Growth Forest

Coastal Lagoon

None of the above

Interdunal

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?		
For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VIO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 $\boxed{\checkmark}$ YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)	
	improve water quality	,	
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure	
D	Unit is a depression with no surface water leaving it (no outlet) points = 3 Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and		
	no obvious natural outlet and/or outlet is a man-made ditch (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing \$\text{S}\$ 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS)	0	
_	definitions)	0	
$ \mathbf{D} $	YES $points = 4$		
	NO points = 0		
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure	
Ъ	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$	5	
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$		
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$		
	Wetland has persistent, ungrazed vegetation <1/10 of area points = 0		
	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation.	Figure	
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate	0	
	area as the average condition 5 out of 10 yrs.		
	Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4		
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2		
	Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods		
_			
D	Total for D 1 Add the points in the boxes above	7.00	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas,	(see p. 44)	
	farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland	multiplier	
	 Wetland is fed by groundwater high in phosphorus or nitrogen Other YES multiplier is 2 NO multiplier is 1 	Yes	
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	14.00	

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire unit is in the FLATS class Total for D 3 Add the points in the boxes above	3
D	^	8
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems	(see p. 49)
	— Other	No
Ъ	YES multiplier is 2 NO multiplier is 1 TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4	
D	Add score to table on p. 1	8

These questions apply to wetlands of all HO HABITAT FUNCTIONS - Indicators that unit func		t habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to j	provide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defin		shold for each	2 Struc.
class is ¼ acre or more than 10% of the area if unit	t is smaller than 2.5 acres.		4
Aquatic bed Emergent plants			1
Scrub/shrub (areas where shrubs have >309	6 cover)		
Forested (areas where trees have >30% cov			
If the unit has a forested class check if:	/		
The forested class has 3 out of 5 strata (car	nopy, sub-canopy, shrubs, h	erbaceous,	
moss/ground-cover) that each cover 20%			
Add the number of vegetation structures that qualify.			
	4 structures or more	points $= 4$	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
	2 structures	points = 1	
II 1 2 Hydromoriada (200 m. 72)	1 structure	points = 0	Figure
H 1.2. <u>Hydroperiods (see p. 73)</u> Check the types of water regimes (hydroperiods) p	wasant within the wetland	The water	
regime has to cover more than 10% of the wetland			3 types
descriptions of hydroperiods)	or 74 dere to count. (see text	101	
Permanently flooded or inundated	4 or more types preser	t points $= 3$	
Seasonally flooded or inundated	3 types present	_	
Occasionally flooded or inundated	2 types present	_	
Saturated only	1 type present	points $= 0$	2
Permanently flowing stream or river in, or ac			
Seasonally flowing stream in, or adjacent to,	the wetland		
Lake-fringe wetland = 2 points	Maria		
Freshwater tidal wetland = 2 points	Map of hyd	roperiods	
H 1.3. Richness of Plant Species (see p. 75)			<5 sp.
Count the number of plant species in the wetland that cover at least 10 ft ² . (different patches			<υ υρ.
of the same species can be combined to meet the s	ize threshold)		0
You do not have to name the species. Do not include Eurasian Milfoil, reed canarys	erass numla laggestrife Co	madian Thistle	
If you counted:	> 19 species	points = 2	
List species below if you want to:	5 - 19 species	points = 1	
Zist species celen y you num tel	< 5 species	points $= 0$	
	1	1	

Total for page 3

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
None = 0 points Low = 1 point Moderate = 2 points	
	0
High = 3 points [riparian braided channels]	
NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0
Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	3

Comments

H 2. Does the wetland unit have the opportunity t	o provide habitet for many energy?	
H 2.1 <u>Buffers</u> (see p. 80)	to provide nabitat for many species:	Figure
Choose the description that best represents condition of l	buffer of wetland unit. The highest scoring	rigure
criterion that applies to the wetland is to be used in the r		
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated	l areas, rocky areas, or open water >95%	
of circumference. No structures are within the u	indisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscapi	ng, no daily human use) $Points = 5$	
— 100 m (330 ft) of relatively undisturbed vegetate	· -	
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated	· -	
circumference.	Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated	· -	
circumference, .	Points = 3	1
— 50 m (170ft) of relatively undisturbed vegetated	*	
50% circumference.	Points = 3	
If buffer does not meet any o		
No paved areas (except paved trails) or buildings		
circumference. Light to moderate grazing, or law		
— No paved areas or buildings within 50m of wetla		
Light to moderate grazing, or lawns are OK.	Points = 2 Points = 1	
Heavy grazing in buffer.Vegetated buffers are <2m wide (6.6ft) for more		
fields, paving, basalt bedrock extend to edge of v		
Buffer does not meet any of the criteria above.	Points = 1	
	al photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)	- Proceeding to amore	
H 2.2.1 Is the wetland part of a relatively undisturb	ed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wid	e, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estua		
uplands that are at least 250 acres in size? (dams in		No
roads, paved roads, are considered breaks in the corridor).		
YES = 4 points (go to H 2.3)	NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturb	· ·	
(either riparian or upland) that is at least 50ft wide, forest, and connects to estuaries, other wetlands or		No
acres in size? OR a Lake-fringe wetland, if it doe	•	No
the question above?	s not have an undistarted corridor as in	
YES = 2 points $(go \text{ to } H 2.3)$	NO = H 2.2.3	
H 2.2.3 Is the wetland:	2.2.2.0	
within 5 mi (8km) of a brackish or salt wate	r estuary OR	Yes
within 3 mi of a large field or pasture (>40 a		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point	NO = 0 points	

Total for page 2

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other. Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	0
long.	Ĭ,
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile.	3
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	5
TOTAL for H 1 from page 14	3
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	8

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? No \(\sqrt{ Is not a bog for purpose of rating} \) 2. YES = Category ICat. I

SC 4.0 Forested Wetlands (see p. 90)	
Does the wetland unit have at least 1 acre of forest that meet one of these criteria for	
the Department of Fish and Wildlife's forests as priority habitats? <i>If you answer yes</i>	
you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species,	
forming a multi-layered canopy with occasional small openings; with at least 8	
trees/acre (20 trees/hectare) that are at least 200 years of age OR have a	
diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found	
in old-growth.	Cot I
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
 The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks 	
— The lagoon in which the wetland is located contains surface water that is	
saline or brackish (> 0.5 ppt) during most of the year in at least a portion	
of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon	
125 – Go to SC 3.1 NO_\ not a wettaild in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling,	
cultivation, grazing), and has less than 20% cover of invasive plant	
species (see list of invasive species on p. 74).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet)	Cal. I
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	Not
Choose the "highest" rating if wetland falls into several categories, and record on p. 1.	Applicable
If you answered NO for all types enter "Not Applicable" on p.1	

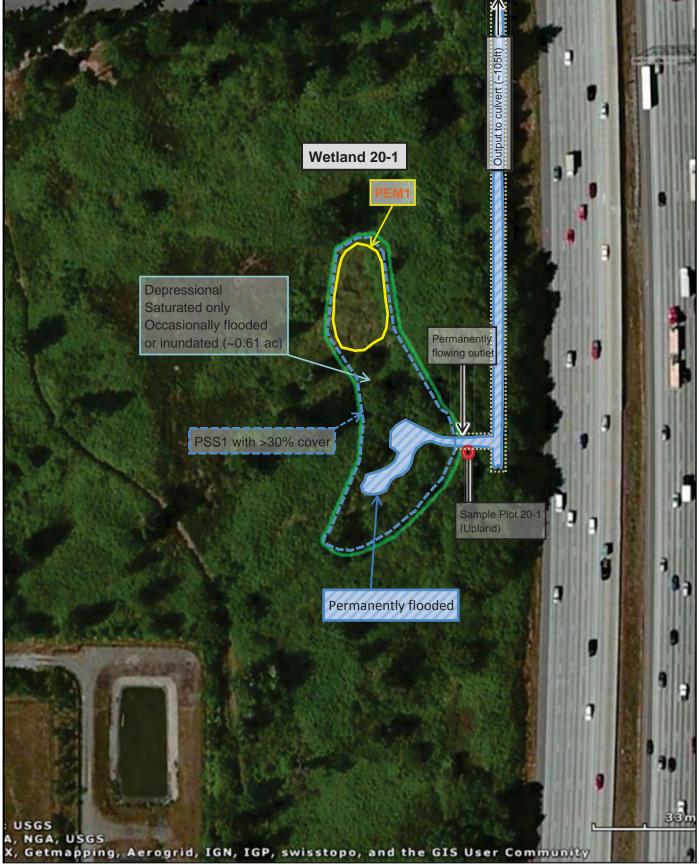




Figure 20-1. Wetland 20-1



WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): 20-2	Date of site visit: 3/22/13, 3/25/14
Rated by P. Togher/ L Danielski Train	ed by Ecology? Yes ✓No Date of training 5/2005
SEC: 9 TWNSHP: 22N RNGE: 4E Is S/T/F	R in Appendix D? Yes No ✓
Map of wetland unit: Figure	Estimated size 0.6 ac
SUMMARY	Y OF RATING
Category based on FUNCTIONS provid	ed by wetland
I II III_✓ IV	
Cotagory I - Score > -70	Score for Water Quality Functions 18
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 6
Category III = Score 30-50	Score for Habitat Functions 10
Category IV = Score < 30	TOTAL score for Functions 34
Category based on SPECIAL CHARAC	TERISTICS of wetland
I II Does not Apply ✓	
Final Category (choose the "	highest" category from above)
· · · · · · · · · · · · · · · · · · ·	ation about the wetland unit
Wetland Unit has Special Characteristics	Wetland HGM Class
Estuarine	used for Rating Depressional ✓

Summary of basic information about the wetland unit			
Wetland Unit has Special		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine		Depressional	\
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	1	Check if unit has multiple	
	V	HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ✓ NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VIO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
The wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the
surface, at some time during the year. This means that any outlet, if present, is higher than the
<u>interior of the wetland.</u>
\square NO – go to 7 \bigvee YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)	
D	improve water quality D 1. Does the wetland unit have the potential to improve water quality?		
	D 1.1 Characteristics of surface water flows out of the wetland:		
D	Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing")		
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	0	
D	$\begin{array}{c} \textit{definitions}) \\ \text{YES} \\ \text{NO} \\ \end{array} \qquad \begin{array}{c} \text{points} = 4 \\ \text{points} = 0 \end{array}$	0	
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure	
D	Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$	5	
	Wetland has persistent, ungrazed vegetation $> 1/10$ of area points $= 1$ Wetland has persistent, ungrazed vegetation $< 1/10$ of area points $= 0$ Map of Cowardin vegetation classes		
	D1.4 Characteristics of seasonal ponding or inundation.	Figure	
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 0 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0 Map of Hydroperiods	2	
D	Total for D 1 Add the points in the boxes above	9.00	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other		
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	12 00	
	Add score to table on p. 1	18.00	

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)	
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?		
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2	
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	1	
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3	
D	Total for D 3 Add the points in the boxes above	6	
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise		
	flow into a river or stream that has flooding problems — Other	multiplier No	
	YES multiplier is 2 NO multiplier is 1	INU	
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	6	

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			Points (only 1 score per box)	
H 1. Does the wetland unit have the potential to p	rovide habitat for many	species?		
H 1.1 Vegetation structure (see p. 72)				
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each				
class is ¼ acre or more than 10% of the area if unit	is smaller than 2.5 acres.		2 Struc.	
Aquatic bed			1	
Emergent plants	201/24)			
Scrub/shrub (areas where shrubs have >30% Forested (areas where trees have >30% cove				
If the unit has a forested class check if:)			
The forested class has 3 out of 5 strata (can	opy, sub-canopy, shrubs, he	rbaceous.		
moss/ground-cover) that each cover 20%				
Add the number of vegetation structures that qualify. I				
	4 structures or more	points $= 4$		
Map of Cowardin vegetation classes	3 structures	points $= 2$		
	2 structures	points = 1		
	1 structure	points $= 0$		
H 1.2. Hydroperiods (see p. 73)			Figure	
Check the types of water regimes (hydroperiods) p			2 types	
regime has to cover more than 10% of the wetland of descriptions of hydroperiods)	or ¼ acre to count. (see text)	ror		
Permanently flooded or inundated	4 or more types present	points = 3		
Seasonally flooded or inundated	3 types present	points $= 3$ points $= 2$		
Occasionally flooded or inundated	2 types present	point = 1		
Saturated only	1 type present	points $= 0$	1	
Permanently flowing stream or river in, or ad	• • •	•		
Seasonally flowing stream in, or adjacent to,	the wetland			
Lake-fringe wetland = 2 points				
Freshwater tidal wetland = 2 points	Map of hydr	operiods		
H 1.3. Richness of Plant Species (see p. 75)	2		5 10 co	
Count the number of plant species in the wetland the		ferent patches	5 -19 sp.	
of the same species can be combined to meet the si	ze threshold)		1	
You do not have to name the species.		J: Tl.: -41 -		
Do not include Eurasian Milfoil, reed canarygo If you counted:	> 19 species	points $= 2$		
List species below if you want to:	5 - 19 species	points = 1		
List species below if you want to.	< 5 species	points $= 0$		
	ve species	Pomo		

Total for page 3

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	None
None = 0 points Low = 1 point Moderate = 2 points	
	0
High = 3 points [riparian braided channels]	
NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	0
Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	3

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 Buffers (see p. 80)	Figure	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	i iguio	
criterion that applies to the wetland is to be used in the rating. See text for definition of		
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer. (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, . Points = 3	3	
✓ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	3	
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
 No paved areas or buildings within 50m of wetland for >50% circumference. 		
Light to moderate grazing, or lawns are OK. Points = 2		
Heavy grazing in buffer.Points = 1		
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled		
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.		
Buffer does not meet any of the criteria above.Points = 1		
Aerial photo showing buffers		
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest		
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel		
roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$		
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$ H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in		
the question above?		
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point NO = 0 points		

Total for page 4

TYAON II I I I I I I I I I I I I I I I I I	I
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	None
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	0
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	
12.1 1.ca oy normana are amanened in question 11 2.1)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that	3
best fits) (see p. 84)	
There are at least 3 other wetlands within ½ mile, and the connections between them are	
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some	
boating, but connections should NOT be bisected by paved roads, fill, fields, or other	
development. points = 5	
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe	
wetlands within ½ mile points = 5	
There are at least 3 other wetlands within ½ mile, BUT the connections between them are	
disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat	 1 ₇
Add the scores from H2.1,H2.2, H2.3, H2.4	/
TOTAL for H 1 from page 14	3
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	10

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt.	
$YES = Go to SC 1.1 \qquad NO \checkmark$	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park,	
National Estuary Reserve, Natural Area Preserve, State Park or Educational,	Cat. I
Environmental, or Scientific Reserve designated under WAC 332-30-151?	
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the	~ . •
following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling,	Cat. II
cultivation, grazing, and has less than 10% cover of non-native plant	
species. If the non-native <i>Spartina</i> spp. are the only species that cover	D1
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a	O
Category I. Do not, however, exclude the area of Spartina in	I/II
determining the size threshold of 1 acre.	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of

species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?

No \(\sqrt{ Is not a bog for purpose of rating} \)

2. YES = Category I

Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
 Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO ✓ not a wetland in a coastal lagoon 	
 SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of 	
shrub, forest, or un-grazed or un-mowed grassland.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet)	
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cut. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics Choose the "highest" rating if wetland falls into several categories, and record on p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

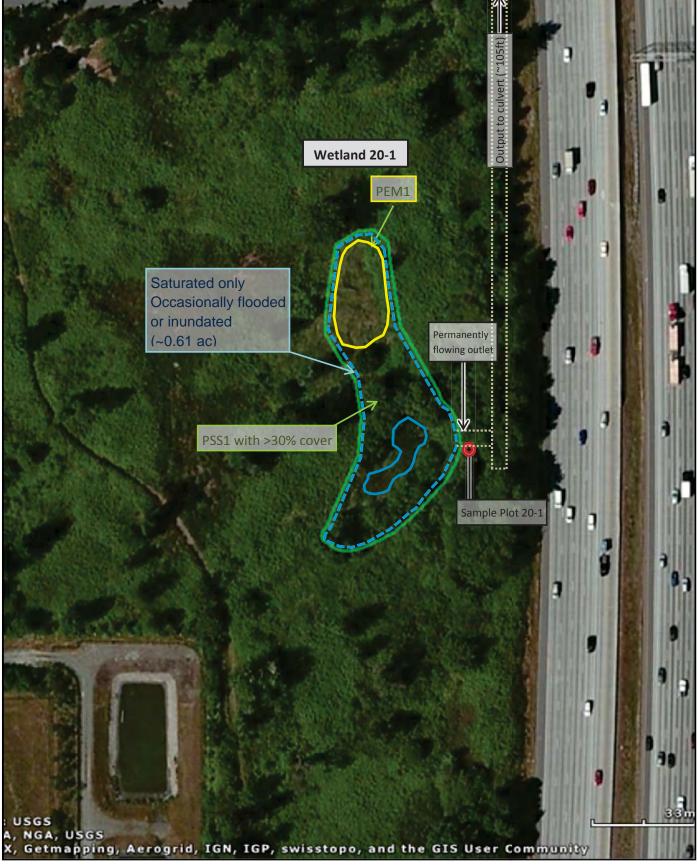




Figure 20-1. Wetland 20-1

Legend Wetland Saturation Drainage Ditch Standing Water Emergent Veg Sample Point

RATING SUMMARY – Western Washington

Name of wetland (or ID #): 20-3			Date of	site visit: <u>2/15/</u> 2016
Rated by L. Daniels	ki/M.Dalzell	Traine	d by Ecology?	✓ Yes 🔲 No	o Date of training 03/06
HGM Class used fo	r rating Depres	ssional	Wetland has m	ultiple HGN	1 classes? Y V N
	is not complete f base aerial pho			ed (figures d	can be combined).
VERALL WETLA	ND CATEGO	RY III (ba	ised on function	ns 🔽 or spe	ecial characteristics_
1. Category of v	wetland based	d on FUNCTIO	ONS		
	Category I – Tota	al score = 23 - 2	27		Score for each
	Category II – Tot	tal score = 20 -	22		function based
	Category III – To	otal score = 16	- 19		on three
	Category IV – Total score = 9 - 15 (order of ratings is not				order of ratings is not
FUNCTION	Improving	Hydrologic	Habitat		important)
	Water Quality				9 = H,H,H
		Circle the ap	propriate ratings		8 = H,H,M
Site Potential	H M M ✓ L	H MVL	H		7 = H,H,L
Landscape Potential	H M ✓ L	H M ✓ L	H□ M√ L□		7 = H,M,M
Value	H √ M□L□	H □ M ✓ L	H□ M□ L√	TOTAL	6 = H,M,L 6 = M,M,M
Score Based on	7	6	1	17	5 = H,L,L
Ratings	1	6	4	17	5 = M,M,L
					4 = M,L,L
					3 = L,L,L
2 Cotogowy boo	ad an CDECIA	LCHADACTE	DICTICC of	اممالا	

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I I II
Interdunal	I _II _ III _ IV
None of the above	*

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	20-3-1
Hydroperiods	D 1.4, H 1.2	20-3-1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	20-3-1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	20-3-2
Map of the contributing basin	D 4.3, D 5.3	20-3-3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	20-3-4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	20-3-5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	20-3-6

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1.	Are the water levels in the entire unit usually controlled by tides except during floods?	
	NO – go to 2 YES – the wetland class is Tidal Fringe – go to 1.1	
1	1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?	
	NO – Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.	•
2.	The entire wetland unit is flat and precipitation is the only source ($>90\%$) of water to it. Groundwat and surface water runoff are NOT sources of water to the unit.	ter
	✓ NO – go to 3	
3.	Does the entire wetland unit meet all of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without an plants on the surface at any time of the year) at least 20 ac (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m).	ny
	✓ NO – go to 4 YES – The wetland class is Lake Fringe (Lacustrine Fringe)	
4.	Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, The water leaves the wetland without being impounded .	
	NO – go to 5 YES – The wetland class is Slope	
	NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually $<$ 3 ft diameter and less than 1 ft deep).	
5.	Does the entire wetland unit meet all of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river, The overbank flooding occurs at least once every 2 years.	t

We	etland name or number	
	✓ NO – go to 6 NOTE : The Riverine unit can contain depressinot flooding	YES – The wetland class is Riverine ons that are filled with water when the river is
6.		pression in which water ponds, or is saturated to the neans that any outlet, if present, is higher than the interior
	□ NO – go to 7	YES – The wetland class is Depressional
7.	flooding? The unit does not pond surface wat	area with no obvious depression and no overbank er more than a few inches. The unit seems to be The wetland may be ditched, but has no obvious natural
	□ NO – go to 8	YES – The wetland class is Depressional

20-3

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	3
points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 🗸 No =	0 0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	
✓ Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	5
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	0
Area seasonally ponded is > 1/4 total area of wetland points = 2	
✓ Area seasonally ponded is < ¼ total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	8
Rating of Site Potential If score is: $\boxed{ 12-16 = H }$ $$ $$ 6-11 = M $$ 0-5 = L Record the rating on the first p	age
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No =	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No =	1
D 2.3. Are there septic systems within 250 ft of the wetland?	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	0
SourceYes = 1	
Total for D 2 Add the points in the boxes above	1
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the f	irst page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No =	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No =	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?	0 2
Total for D 3 Add the points in the boxes above	3
Rating of Value If score is: $\boxed{2}$ -4 = H $\boxed{1}$ = M $\boxed{0}$ = L Record the rating on the first page	

Wetland 20-3 is located in the McSorley Creek basin in WRIA 9. McSorley Creek is on the 303(d) list

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degrada	tion
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2 4
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in)	0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. ☐ The area of the basin is less than 10 times the area of the unit ☐ The area of the basin is 10 to 100 times the area of the unit ☐ The area of the basin is more than 100 times the area of the unit ☐ Entire wetland is in the Flats class ☐ Points = 5 ☐ Description of the area of upstream basin contribution of the area of the unit	3
Total for D 4 Add the points in the boxes above	7
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the	e first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No =	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 6	1
Total for D 5 Add the points in the boxes above	2
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the	e first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	-
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ■ Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ■ Surface flooding problems are in a sub-basin farther down-gradient. points = 1 ■ Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 ■ There are no problems with flooding downstream of the wetland. points = 0	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No =	0
Total for D 6 Add the points in the boxes above	1
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on th	e first page

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:	
\square Depressions cover $>^3/_4$ area of wetland points = 8	
Depressions cover > ½ area of wetland points = 4	0
Depressions present but cover < ½ area of wetland points = 2	
No depressions present points = 0	
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, not Cowardin classes)	
Trees or shrubs $> \frac{2}{3}$ area of the wetland points = 8	
\square Trees or shrubs > $^{1}/_{3}$ area of the wetland points = 6	
Herbaceous plants (> 6 in high) > $^2/_3$ area of the wetland points = 6	0
Herbaceous plants (> 6 in high) > $\frac{1}{3}$ area of the wetland points = 3	
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland points = 0	
Total for R 1 Add the points in the boxes above	0
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on	the first page
	-
R 2.0. Does the landscape have the potential to support the water quality function of the site?	
R 2.1. Is the wetland within an incorporated city or within its UGA?	0
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area? Yes = 1 No = 0	0
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years? Yes = 1 No = 1	0
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	0
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources Yes = 1 No = 0	0
Total for R 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L Record the rating on	the first page
R 3.0. Is the water quality improvement provided by the site valuable to society?	
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	
Yes = 1 No =	0
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens? Yes = 1 No = 0	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found) [Yes = 2 No = 0	0
Total for R 3 Add the points in the boxes above	0
Rating of Value If score is 2-4 = H 1 = M 0 = L Record the rating on	the first page

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosio	n
R 4.0. Does the site have the potential to reduce flooding and erosion?	
R 4.1. Characteristics of the overbank storage the wetland provides:	0
Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the	
stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average	
width of stream between banks).	
If the ratio is more than 20 points = 9	
If the ratio is 10-20 points = 6	
If the ratio is 5-<10 points = 4	
If the ratio is 1-<5 points = 2	
If the ratio is < 1 points = 1	
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat large woody debris as forest or	0
shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person	
height. These are <u>NOT Cowardin</u> classes).	
Forest or shrub for $> \frac{1}{3}$ area OR emergent plants $> \frac{2}{3}$ area points = 7	
Forest or shrub for $> \frac{1}{10}$ area OR emergent plants $> \frac{1}{3}$ area points = 4	
☐ Plants do not meet above criteria points = 0	
Total for R 4 Add the points in the boxes above	0
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the	he first page
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
R 5.1. Is the stream or river adjacent to the wetland downcut? Yes = 0 No = 1	0
R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1 No = 0	0
R 5.3. Is the up-gradient stream or river controlled by dams? Yes = 0 No = 1	0
Total for R 5 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the	he first page
R 6.0. Are the hydrologic functions provided by the site valuable to society?	
R 6.1. Distance to the nearest areas downstream that have flooding problems?	0
Choose the description that best fits the site.	U
The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to	
human or natural resources (e.g., houses or salmon redds) points = 2	
Surface flooding problems are in a sub-basin farther down-gradient points = 1	
No flooding problems anywhere downstream points = 0	
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0
Total for R 6 Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the	he first page

LAKE FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
L 1.0. Does the site have the potential to improve water quality?	
L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes): Plants are more than 33 ft (10 m) wide Plants are more than 16 ft (5 m) wide and <33 ft Plants are more than 6 ft (2 m) wide and <16 ft Plants are less than 6 ft wide Plants are less than 6 ft wide	0
L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >²/₃ of the vegetated area points = 4 Cover of herbaceous plants is >¹/₃ of the vegetated area points = 3 Other plants that are not aquatic bed > ²/₃ unit points = 3 Other plants that are not aquatic bed in > ¹/₃ vegetated area points = 1 Aquatic bed plants and open water cover > ²/₃ of the unit points = 0	0
Total for L 1 Add the points in the boxes above	0
Rating of Site Potential If score is: 8-12 = H 4-7 = M 0-3 = L Record the rating on the	he first page
L 2.0. Does the landscape have the potential to support the water quality function of the site?	r
L 2.1. Is the lake used by power boats? $\qquad \qquad \qquad$	0
L 2.2. Is > 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?	0
L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil? Yes = 1 No = 0	0
Total for L 2 Add the points in the boxes above	0
Rating of Landscape Potential: If score is: 2 or 3 = H 1 = M 0 = L Record the rating on the	he first page
L 3.0. Is the water quality improvement provided by the site valuable to society?	
L 3.1. Is the lake on the 303(d) list of degraded aquatic resources? $\qquad \qquad \qquad$	0
L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)? \square Yes = 1 \square No = 0	0
L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the lake or basin in which the unit is found. \Box Yes = 2 \Box No = 0	0
Total for L 3 Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the	he first page

LAKE FRINGE WETLANDS		
Hydrologic Functions - Indicators that the wetland unit functions to reduce sho	reline erosio	on
L 4.0. Does the site have the potential to reduce shoreline erosion?		
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not include Aq	uatic bed):	0
Choose the highest scoring description that matches conditions in the wetland.		O
> ¾ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6	
> 3/4 of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4	
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4	
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2	
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0	
Rating of Site Potential: If score is: 6 = M 0-5 = L Record	the rating on t	he first page
L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
L 5.1. Is the lake used by power boats with more than 10 hp?	1 No = 0	0
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	1 No = 0	0
Total for L 5 Add the points in the bo	xes above	0
Rating of Landscape Potential If score is: 2 = H 1 1 = M 0 = L Record	the rating on t	ha first naga
hecord	the ruting on t	ne jirst page
L 6.0. Are the hydrologic functions provided by the site valuable to society?		
L 6.0. Are the hydrologic functions provided by the site valuable to society:		
L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is p	oresent,	0
choose the one with the highest score.	-	U
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the	unit	
	points = 2	
☐ There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1	
Other resources that could be impacted by erosion	points = 1	
There are no resources that can be impacted by erosion along the shores of the unit	points = 0	
	the rating on t	he first nage

NOTES and FIELD OBSERVATIONS:

SLOPE WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	0
Slope is 1% or less Slope is > 1%-2% points = 2	
Slope is > 2%-5% points = 1	
Slope is greater than 5% points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	0
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.	
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6	
Dense, uncut, herbaceous plants > $\frac{1}{2}$ of area points = 3	
Dense, woody, plants > ½ of area points = 2	
Dense, uncut, herbaceous plants > ¼ of area points = 1	
Does not meet any of the criteria above for plants points = 0	
Total for S 1 Add the points in the boxes above	0
Rating of Site Potential If score is: 12 = H 6-11 = M 0-5 = L Record the rating on	the first page
S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? $Test{Yes} = 1$ $Test{No} = 0$	_
	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	0
	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources	O O the first page
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources	O 0 the first page
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources	O 0 the first page O 0

SLOPE WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream eros	iion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1	0
All other conditions points = 0 Rating of Site Potential If score is: 1 = M 0 = L Record the rating on	the first page
S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? \square Yes = 1 \square No = 0	0
Rating of Landscape Potential If score is:1 = M0 = L Record the rating on a	the first page
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on	the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes.		
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat		
H 1.0. Does the site have the potential to provide habitat?		
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed Emergent Scrub-shrub (areas where shrubs have > 30% cover) Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	0	
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated Seasonally flooded or inundated Saturated only Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland Freshwater tidal wetland 2 points	1	
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species c 5 species	0	
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Low = 1 point Moderate = 2 points All three diagrams in this row are HIGH = 3points	0	

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). Standing snags (dbh > 4 in) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	1
where wood is exposed) At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	2
Rating of Site Potential If score is: 15-18 = H 7-14 = M 0-6 = L Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: % undisturbed habitat $\frac{3.00}{}$ + [(% moderate and low intensity land uses)/2] $\frac{8.00}{}$ = $\frac{11.00}{}$ % If total accessible habitat is:	1
\square > $^{1}/_{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
✓ 10-19% of 1 km Polygon points = 1	
<pre></pre>	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	2
Calculate: % undisturbed habitat $\frac{15.00}{}$ + [(% moderate and low intensity land uses)/2] $\frac{10.00}{}$ = $\frac{25.00}{}$ %	_
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	
Undisturbed habitat 10-50% and > 3 patches Dualisturb of habitat 4.10% of 1 km Pakisan	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	-2
Total for H 2 Add the points in the boxes above	1
Rating of Landscape Potential If score is: $4-6 = H \sqrt{1-3} = M \sqrt{1-3} = L$ Record the rating on a	the first nage
	ine jiist page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score</i>	0
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2 It has 3 or more priority habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW priority species	
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If score is: $2 = H 1 = M 2 = L$ Record the rating or	the first page

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: *NOTE:* This question is independent of the land use between the wetland unit and the priority habitat.

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.

Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 see web link above*).
- **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).

Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).

Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

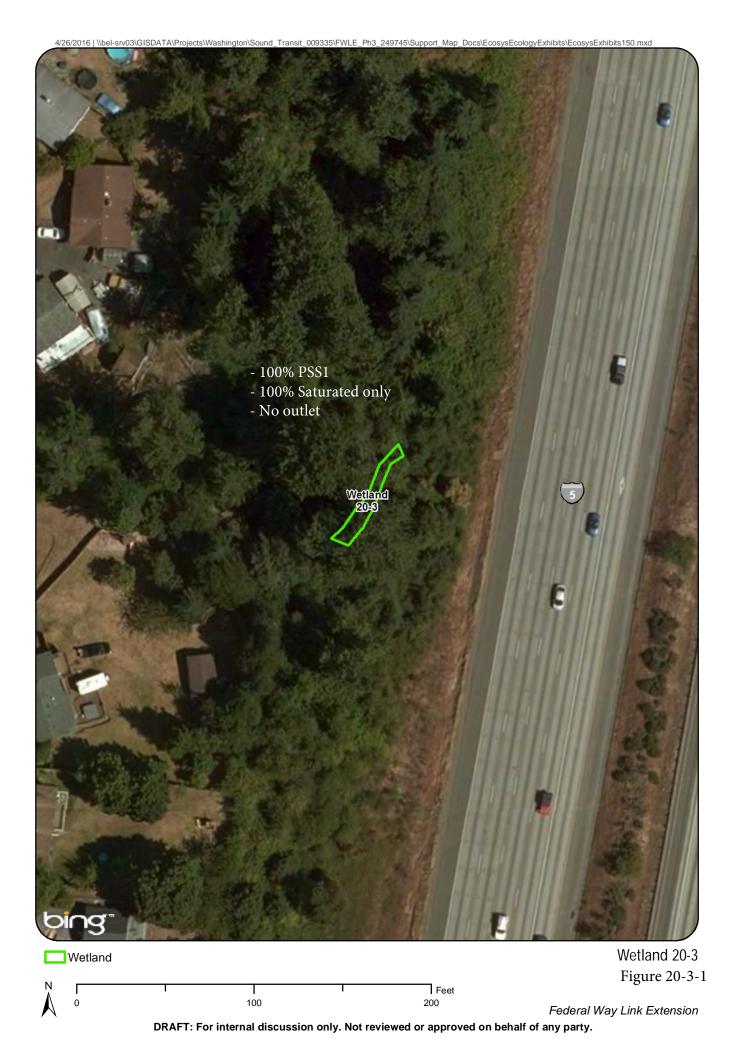
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
☐ With a salinity greater than 0.5 ppt ☐ Yes –Go to SC 1.1 ☐ No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Preserve, state Park of Educational, Environmental, of Scientific Reserve designated under WAC 552-50-151?	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)	Cat. I
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	Cat. I
Conservation Value?	
Yes = Category I	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	Cat. I
plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	Cat. I
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

SC 4.0. Forested Wetlands	
Does the wetland have at least $\underline{1 \text{ contiguous acre}}$ of forest that meets one of these criteria for the WA	
Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate</i>	
the wetland based on its functions. Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered	
canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of	
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.	
Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	C-4 . [
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from	
marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt)	
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	
SC 5.1. Does the wetland meet all of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less	Cat. II
than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).	Cat. II
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103	Cat I
Grayland-Westport: Lands west of SR 105	Cat I
☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes – Go to SC 6.1 ✓ No = not an interdunal wetland for rating	
E 163 GO to 36 0.1 E 100 an interdunal wedana for ruting	
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	Cat. II
for the three aspects of function)?	
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3	Cat. III
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Catagony of westend based on Special Characteristics	Cat. IV
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Wetland name or number 20-3

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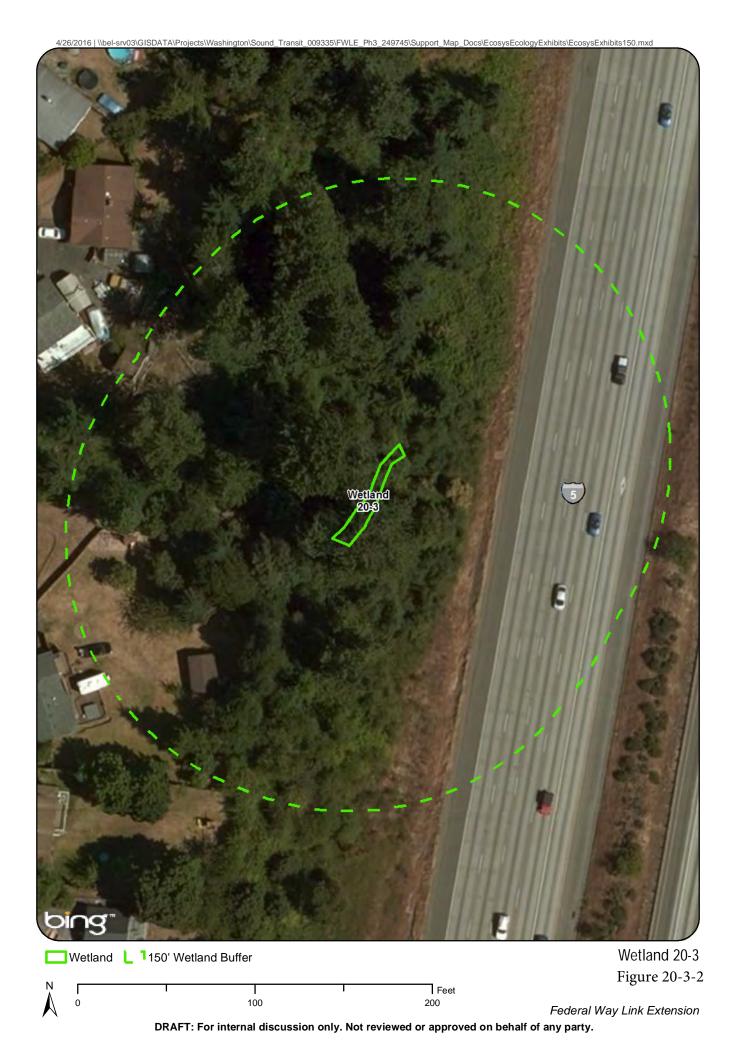
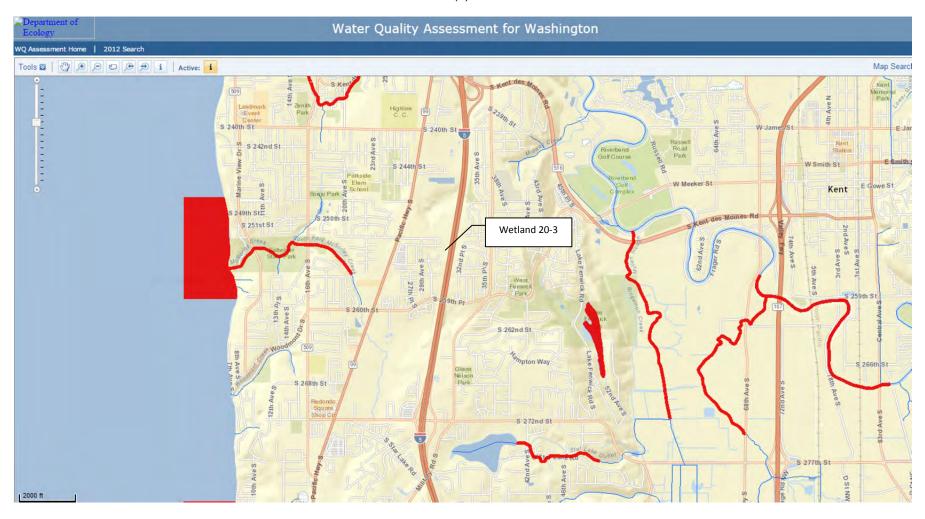




Figure 20-3-3



Wetland 20-3: 303(d) listed waters





http://www.ecy.wa.go

Vater Quality Improvement Projects (TMDLs)

'ater Quality Improvement > Water Quality Improvement Projects by WRIA 9: Duwamish-Green

VRIA 9: Duwamish-Green

ne following table lists overview information for water quality improvement projects (including total maximum daily loads, or TMDLs) for this water resource inventory area (WRIA). Please use links (where available) for more information on a project.

Counties

• King

Waterbody Name	Pollutants	Status**	TMDL Lead
Duwamish and Lower Green River	Ammonia-N	Approved by EPA	<u>Joan Nolan</u> 425-649-4425
Fauntleroy Creek	Fecal Coliform	Approved by EPA Has an implementation plan	<u>Joan Nolan</u> 425-649-4425
Fenwick Lake	Total Phosphorus	Approved by EPA (1993, Clean Lakes Program) Category 5, 2008 Water Quality Assessment	<u>Tricia Shoblom</u> 425-649-7288
Green River and Newaukum Creek	Temperature Dissolved Oxygen	Green River TMDL Approved by EPA Newaukum Creek TMDL Approved by EPA Has an implementation plan	<u>Joan Nolan</u> 425-649-4425
Lake Sawyer	Total Phosphorus	Approved by EPA Has an implementation plan	<u>Tricia Shoblom</u> 425-649-7288
Soos Creek	Fecal Coliform	Under development	<u>Dave Garland</u> 425-649-7031
	Aquatic Habitat Dissolved Oxygen Temperature	-	<u>Joan Nolan</u> 425-649-4425

^{**} Status will be listed as one of the following: Approved by EPA, Under Development or Implementation

For more information about WRIA 9:

- Waterbodies in WRIA 9 using the Water Quality Assessment Query Tool
- Watershed Information for WRIA 9
- * The Department of Ecology and other state resource agencies frequently use a system of 62 "Water Resource Inventory Areas" or "WRIAS" to refer to the state's major watershed basins.

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Last updated June 2014

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WETLAND RATING FORM - WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): 23	Date of site visit: 3/21/13
Rated by P. Togher Train	ed by Ecology? Yes ✓No Date of training 5/2005
SEC: <u>27</u> TWNSHP: <u>22N</u> RNGE: <u>4E</u> Is S/T/F	R in Appendix D? Yes No ✓
Map of wetland unit: Figure _	Estimated size 1.2 ac
SUMMARY	OF RATING
Category based on FUNCTIONS provid	ed by wetland
I II III✓ IV	
Catagory I - Score > -70	core for Water Quality Functions 16
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions 7
Category III = Score 30-50	Score for Habitat Functions 11
Category IV = Score < 30	
	TOTAL score for Functions 34
Category based on SPECIAL CHARAC I II Does not Apply_✓ Final Category (choose the "	
	tion about the wetland unit
Wetland Unit has Special	Wetland HGM Class
Characteristics	used for Rating
Estuarine Natural Haritage Wetland	Depressional ✓ Riverine
Natural Heritage Wetland Bog	Lake-fringe
Mature Forest	Slope
Old Growth Forest	Flats
Coastal Lagoon	Freshwater Tidal
Interdunal	

None of the above

Check if unit has multiple

HGM classes present

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)		NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		✓
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? ▼NO – go to 2 YES – the wetland class is Tidal Fringe
If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. ✓ NO – go to 3 YES – The wetland class is Flats
If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? VIO − go to 4 YES − The wetland class is Lake-fringe (Lacustrine Fringe)
In Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). ✓ NO - go to 5 YES - The wetland class is Slope

5. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every two years.
NOTE: The riverine unit can contain depressions that are filled with water when the river is
not flooding.
NO - go to 6 YES – The wetland class is Riverine
6 . Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. <i>This means that any outlet, if present, is higher than the</i>
interior of the wetland.
NO – go to 7 YES – The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank
flooding. The unit does not pond surface water more than a few inches. The unit seems to be
maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
natural outlet.
✓ NO – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation $> = 95\%$ of area points $= 5$ Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$ Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$ Wetland has persistent, ungrazed vegetation $< 1/10$ of area points $= 0$ Map of Cowardin vegetation classes	Figure
D	D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0	Figure
D	Map of Hydroperiods	8.00
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1	(see p. 44) multiplier Yes
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	16.00

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	4
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire unit is in the FLATS class Total for D 3 Add the points in the boxes above	3
	1	
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other	multiplier
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4	_
D	Add score to table on p. 1	7

These questions apply to wetlands of all HO HABITAT FUNCTIONS - Indicators that unit func		ıt habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to j	provide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defin		shold for each	2 Struc.
class is ¼ acre or more than 10% of the area if unit	t is smaller than 2.5 acres.		
Aquatic bed			1
Emergent plants Scrub/shrub (areas where shrubs have >309	/ aavan)		
Forested (areas where trees have >30% cov			
If the unit has a forested class check if:	CI)		
The forested class has 3 out of 5 strata (car	nopy, sub-canopy, shrubs, h	erbaceous.	
moss/ground-cover) that each cover 209			
Add the number of vegetation structures that qualify.			
	4 structures or more	points $= 4$	
Map of Cowardin vegetation classes	3 structures	points = 2	
	2 structures	points = 1	
	1 structure	points = 0	
H 1.2. <u>Hydroperiods (see p. 73)</u>		TI.	Figure
Check the types of water regimes (hydroperiods) p			1 type
regime has to cover more than 10% of the wetland descriptions of hydroperiods)	or ¼ acre to count. (see tex	t for	
Permanently flooded or inundated	4 or more types presen	nt points = 3	0
Seasonally flooded or inundated	3 types presen	_	
Occasionally flooded or inundated	2 types presen	_	
✓ Saturated only	1 type present	•	
Permanently flowing stream or river in, or ac	• • •	1	
Seasonally flowing stream in, or adjacent to,			
Lake-fringe wetland = 2 points			
Freshwater tidal wetland = 2 points	Map of hyd	droperiods	
H 1.3. Richness of Plant Species (see p. 75)			5 40
Count the number of plant species in the wetland to	that cover at least 10 ft ² . (d	ifferent patches	5 -19 sp.
of the same species can be combined to meet the s	ize threshold)		1
You do not have to name the species.			'
Do not include Eurasian Milfoil, reed canaryg			
If you counted:	> 19 species	points $= 2$	
List species below if you want to:	5 - 19 species	points = 1	
	< 5 species	points $= 0$	

Total for page 2

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	None
mudflats) is high, medium, low, or none.	
	0
None = 0 points $Low = 1$ point $Moderate = 2$ points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	1
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in each stratum of plants 	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	3
Thus the scores from 111.1, 111.2, 111.3, 111.7, 111.3	

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 <u>Buffers</u> (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	4
criterion that applies to the wetland is to be used in the rating. See text for definition of	4
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) $Points = 5$	
✓ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
 No paved areas or buildings within 50m of wetland for >50% circumference. 	
Light to moderate grazing, or lawns are OK. Points = 2	
Heavy grazing in buffer.Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.	
Buffer does not meet any of the criteria above.Points = 1	
Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	No
roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$ H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	No
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	INO
the question above?	
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	Yes
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres?	
YES = 1 point NO = 0 points	

Total for page 5

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	None
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	INOTIC
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	0
long.	O I
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile.	3
H 2. TOTAL Score - opportunity for providing habitat	8
Add the scores from H2.1,H2.2, H2.3, H2.4 TOTAL for H 1 from page 14	3
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	11

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
 — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ✓ 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	ъ.
more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Cat. I Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ____ NO ✓ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? NO ✓ not a Heritage Wetland YES = Category ISC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes go to Q. 3 No - go to Q. 2 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? 2. YES = Category INo ✓ Is not a bog for purpose of rating

Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for	
the Department of Fish and Wildlife's forests as priority habitats? <i>If you answer yes</i>	
you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO ✓ not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
 The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks 	
— The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	
YES = Go to SC 5.1 NO $\sqrt{}$ not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling,	
cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	~ . •
shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 acre (4350 square feet)	Cat. I
YES = Category I NO = Category II	Cat. II
TES - Category I 110 - Category II	

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO ✓ not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	N/A
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

